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ADDRESSES.

SUICIDE AS A MENTAL EPIDEMIC.

Read before the Medico-Legal Congress, at New York City, Sept. 5, 1895.

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The question of suicide is one which for some time has occupied public attention. During the present year, in consequence of the alarming increase of suicide, I have decided to choose this subject for our consideration, hoping that perhaps what I shall place before the society may prove of interest to its members and draw their serious attention to a grave question.

All human actions are under the influence and power of example more than precept, and consequently self-destruction has often been justified by an appeal to the laws and customs of past ages. An undue reverence for the authority of antiquity induces us to rely more upon what has been said or done in former times than upon the dictates of our own feelings and judgment. Many a mistaken individual has formed the most extravagant notions of honor, liberty and courage, and, under the impression that he was imitating the example of some ancient hero, has sacrificed his life. He may possibly urge in his defense that suicide has been enjoined by positive laws and allowed by ancient custom; that the greatest and bravest nation in the world practiced it, and that the most wise and virtuous sect of philosophers taught that it was an evidence of courage, magnanimity and virtue. The force of example is one which appeals to the mind of certain individuals, but is in itself based solely on a fallacy.

No inferences deduced from the consideration of the suicides of antiquity apply nowadays, as we live under a Christian dispensation. Our notions of honor, of death, and of courage are in many respects so dissimilar from those which the ancients entertained that the subject of suicide is placed entirely on a different basis. History is replete with examples of moral and criminal epidemics during the past centuries. The force of example and imitation is very great among a certain class of our humanity.

The fourth century is remarkable for the rapid increase and spread of superstition, the reinstitution of image worship, the adoration paid to relics, and the many pious frauds of the so-called monks; the fifth century for the epidemic of climbing to the top of heights and there remaining. Simon, a monk, adopted as a mark of sanctity the singular device of spending thirty-seven years of his life on the top of a high pillar. Led by a false adoration and utterly ignorant of true religion, the inhabitants of Syria and Palestine followed the example of this fanatic and, what is more incredible, this practice continued in vogue until the twelfth century. The rise and spread of Mohammedanism in the seventh century is one of the most remarkable instances of the rapid propagation of ideas and principles.

STRANGE FANCY IN TENTH CENTURY.

In the tenth century a very strange fancy seized upon men's minds. They imagined that the end of the world was close at hand, and multitudes forsook their daily vocation, both civil and domestic, and gave their property to the church, and repaired to Palestine, where they imagined that when the end did come they would be in greater safety. An eclipse of the moon or of the sun was considered as the immediate precursor of the end of all things, and many tried to bribe the Deity by great gifts to the church. In a word, no language is sufficient to express the confusion and despair which tormented the minds of miserable mortals on this occasion. Consequent upon this we have, perhaps, the most extraordinary epidemic for which fanaticism ever is responsible, for vast multitudes left for the Holy Land, and not a meteor fell across the skies but sent whole hordes on the same delusive errand. Scarcely had this excitement departed when the plague, or black death, of the fourteenth century, set in, which appeared in 1333, in China, and passing over Asia westward, and over Europe and Africa, carried off about one-fourth of the population. In Europe it is supposed that 25,000,000 fell victims to this dire pestilence. All epidemic diseases have their moral aspect, and this one was attended by a constellation of fanaticisms and delusions such as man had never witnessed before or since. The specific moral aberrations connected with this period were:

1. The rise and spread of the flagellants, or whippers.
2. The wholesale murder of the Jews on the suspicion of having poisoned the water.
3. The dancing mania.

In Mayence alone, 1,200 Jews were slaughtered by the flagellants, and with this epidemic was associated witchcraft, which then existed and was gradually increasing. The dancing mania in 1374 consisted in persons joining hands and jumping about frantically for hours together, and falling down ultimately in a state of exhaustion. This epidemic was tried during this century in the form of the "Shakers" in the New Forests, but so far as my recollection goes, the best antidote to the revived nonsense was the police court of the district, which evidently had the desired effect.

In the sixteenth century demonomania existed largely, a belief that they were possessed by the devil, and many were burned at the stake in consequence. Our present century has been full of epidemics of one sort or another. I will just name, *en passant*, spiritualism. There are three kinds of individuals

who believe in this, but, not desiring on this occasion to begin a controversy on the subject, I will not refer to them.

Incendiarism, infanticide, kleptomania, homicide and suicide have all during this century been epidemic at one time or another, the force of imitation being so great, and acting prejudicially on weak-minded persons or on those predisposed to mental disorders. In the time of the Ptolemies, a Stoic philosopher preached so earnestly and eloquently on the contempt of life and the blessings of death that suicides became frequent. The ladies of Miletus committed suicide in great numbers because their husbands and brothers were detained at the wars. At Lyons there was an epidemic of drowning among the women. No cause could be assigned for this. It was ultimately checked by the order of the authorities that the bodies of all who drowned themselves should be publicly exposed in the market place. The epidemic was stopped at Miletus by a similar device.

REASONS FOR THIS YEAR'S EPIDEMIC.

An order was made that the bodies of those who hanged themselves should be dragged through the town by the same rope with which they had accomplished their purpose. At Rouen, in 1806, at Stuttgart, in 1811, and at the Valois, in 1813, there are histories of suicide as a powerful epidemic. In 1844 there was an epidemic of voluntary mutilation in the French army, numbers of soldiers being self-mutilated and for no reason. Suicide from poison has often occurred epidemically.

Having thus shown that suicide has during various ages been connected with an epidemic, I would draw the attention of this society to the fact of the recent epidemic which has taken place during the present year, especially during the spring of the year, the alarming character of which is my excuse for drawing your attention to the question of suicide to-day. Speaking generally, the reasons for this epidemic appear to me to be as follows:

1. The great publicity given by the press in publishing revolting details of crime and trials, thus reacting perniciously in the minds of weak-minded persons.

2. Insufficient power of the legislature in suppressing such publicity.

3. The liability to act epidemically in the same way as I have previously mentioned in past ages.

To the medical philosopher nothing can be more deeply interesting than to trace the reciprocity of action existing between different mental conditions and affections of particular organs. Thus the passion of fear, when excited, has a sensible influence on the action of the heart; and when the disease of this organ takes place independently of any mental agitation, the passion of fear is powerfully roused. Anger affects the liver and frequently gives rise to an attack of jaundice; and in hepatic and intestinal disease, how irritable the temper is!

Hope, or the anticipation of pleasure, affects the respiration; and how often do we see patients in the last stage of pulmonary disease entertaining sanguine expectations of recovery to the very last!

As the passions exercise so despotic a tyranny over the physical economy, it is natural to expect that the crime of suicide should often be traced to the influence of mental causes. In many cases it is difficult to discover whether the brain, the seat of the passions, is primarily or secondarily affected. Often the cause of irritation is situated at some distance from the cerebral organ; but when the fountain head of the nervous system becomes deranged, it will react on the bodily functions, and produce serious diseases long after the original cause of excitement is removed.

It is not our intention to attempt to explain the *modus operandi* of mental causes in the production of suicidal disposition. That such effects result from an undue excitement of the mind can not for one moment be questioned. Independently of mental perturbation giving rise to maniacal suicide, there are certain conditions of mind, dependent upon acquired hereditary disposition, or arising from a defective expansion of the intellectual faculties, which originate the desire for self-destruction.

SOME CAUSES FOR SUICIDE.

Some idea of the influence of certain mental states on the body will be obtained by an examination of the various tables which have been published, in this and other countries, respecting the causes of suicide, so far as they could be ascertained. The table for London is as follows:

Indication of Causes.	Men.	Women.
Poverty	905	511
Domestic grief	728	524
Reverse of fortune	322	283
Drunkenness and misconduct	287	208
Gambling	155	141
Dishonor and calumny	125	95
Grief from love	97	157
Disappointed ambition	122	410
Wounded self-love	53	53
Envy and jealousy	94	53
Remorse	49	37
Fanaticism	16	1
Misanthropy	3	3
Causes unknown	1,381	377
Total	4,337	2,853

According to a table formed by Falret of the suicides which took place between 1794 and 1823, the following results appear: of 6,782 cases, 254 were from disappointed love, and of this number 157 were women; 92 were from jealousy, 125 from being calumniated, 49 from a desire without the means of vindicating their characters, 122 from disappointed ambition, 322 from reverses of fortune, 16 from wounded vanity, 155 from gambling, 288 from crime and remorse, 723 from domestic distress, 905 from poverty, 16 from fanaticism.

In considering the influence of mental causes, we shall, in the first instance, point out the effects of certain passions and dispositions of the individual on the body; then investigate the operations of education, irreligion, and certain unhealthy conditions of the mind which predisposes the individual to derangement and suicide.

There is no passion of the mind which so readily drives a person to suicide as remorse. In these cases there is generally a shipwreck of all hope. To live is horror; the infuriated sufferer feels himself an outcast from God and man; and, though his judgment may still be correct upon other subjects, it is completely overpowered upon that of his actual distress, and all he thinks of and aims at is to withdraw as much as possible from the present state of torture, totally regardless of the future.

In England the great majority of the cases of insanity among women in our establishments devoted to

the reception of the insane, can clearly be traced to unrequited and disappointed affection. This is not to be wondered at if we consider the present artificial state of society. We make "merchandise of love;" both men and women are estimated not by their mental endowments, not by their moral worth, not by their capacity of making the domestic fireside happy, but by the length of their respective purses. Instead of seeking for a heart, we look for a dowry. Money is preferred to intellect; pure and unadulterated affection dwindles into nothingness when placed in the scale with titles and worldly honors.

JEALOUSY A MIND DISTURBER.

Few passions tend more to distract and unsettle the mind than that of jealousy. Insanity and suicide often owe their origin to this feeling. One of the most terrific pictures of the dire effects of this "green-eyed monster" on the mind is delineated in the character of Othello. In the Moor of Venice we witness a fearful struggle between fond and passionate love and this corroding mental emotion. Worked upon by the villainous artifices of Iago, Othello is led to doubt the constancy of Desdemona's affection. The very doubt urges him almost to the brink of madness; but when he feels assured of her guilt and sees the gulf into which he has been hurled, and the utter hopelessness of his condition, he abandons himself to despair.

The great increase of the crime of suicide has been referred by many able physicians of the present day to the political excitement to which the minds of the people have been exposed of late years. In despotic countries suicide and insanity are seldom heard of. The passions are checked by the nature of the government, the imagination is not elevated to an unhealthy standard, every man is compelled to follow the calling in life to which he was born and for which he had capacity, and on this account the evil and corrupt dispositions of the mind are to a certain extent kept in abeyance. In republican governments the greatest latitude is allowed to the turbulent passions; all mankind are theoretically placed on an equality, the man "whose talk is of bullocks" considers himself as fit to carry on the complicated business of government as he whose education, associations and experience tend to qualify him for the duties of a legislator.

In proportion as men are exposed to the influence of causes which excite the passions, so will they become predisposed to mental derangement in all its forms. The French and American Revolutions increased considerably the crime of suicide. It has been said that during the Reign of Terror statistical evidence does not show that self-murder was more common than at any other period. Perhaps the alleged infrequency of suicide may be attributed to the circumstance of the French people having been so busy killing others that they had no time to think of killing themselves.

More than the average number of suicides may not have really occurred during the crisis of the Revolution, but it is an undisputed fact that before and after that political convulsion, self-destruction prevailed to an alarming extent. Disappointed hopes, wounded pride and vanity, blighted ambition, loss of property, death of friends, disgust of life, all came into active operation after the turbulence and bloodshed of the Revolution had somewhat subsided. These passions working upon minds easily excited, and not under the benign influence of religion, it is almost natural to expect that great recklessness of life should be exhibited. Such facts demonstrate to us the folly of uselessly exciting the passions of the people, and raising in their minds exaggerated expectations from political changes.

There is no more frequent cause of suicide than visceral derangement, leading to melancholia and hypochondriasis. It has been a matter of dispute with medical men whether hypochondriacal affections have their origin in the mental or physical portion of the economy. Many maintain that the mind is the seat of the disease, others that the liver and the stomach are primarily affected, and the brain only secondarily. In this disputed point, as in most others, truth will generally be found to lie between the two extremities. That cases of hypochondria and melancholia can clearly be traced to purely mental irritation can not for one moment be disputed, and that there are many instances in which the derangement appears to have commenced in one of the gastric organs is equally self-evident. Whatever may be the origin of these affections, there can be no doubt of their producing the most disastrous consequences.

HEREDITARY CHARACTER OF SUICIDE.

With reference to suicide, there is no fact that has been more clearly established than that of its hereditary character. Of all diseases to which the various organs are subject there are none more naturally transmitted from one generation to another than affections of the brain. It is not necessary that the disposition to suicide should manifest itself in every generation. It often passes over one and appears in the next, like insanity unattended with this propensity. But if the members of the family so predisposed are carefully examined, it will be found that the various shades and graduations of the malady will be easily perceptible. Some are distinguished for their flightiness of manner, others for their strange eccentricity, likings, and dislikings, irregularity of their passions, and excitable temperament, hypochondriasis and melancholia. These are often but the minute shades and variations of a hereditary disposition to suicidal madness.

A gentleman suddenly, and without any apparent reason, cut his throat. The father had always been a man of strong passions, easily roused, and when so was extremely violent. The brother was a man of impulse; he always acted by fits and starts, and therefore never could be depended upon. The sister had a strange, unnatural, and superstitious horror of particular colors and odors. A yellow dress caused a feeling approaching to syncope, and the smell of hay produced great nervous excitement. The grandfather had been convicted of homicide, and had been confined for over two years in a mad-house. Andral relates the case of a father who died from the effects of disease of the brain; the mother died sane. They had six children, three boys and three girls. Of the boys, the oldest was a man of original mind; the second was very extravagant in his habits, and was ultimately confined in a mad-house; the third was extremely violent in his temper. Of the girls, one had fits of apoplexy; one became insane; the third died of cholera, not, however, until she exhibited indications of mental aberration.

A case more singular than the last is recorded. All

the members of a particular family being hereditarily disposed, exhibited, when they arrived at a certain age, a desire to commit self-destruction. It required no exciting cause to develop the fatal disposition. No wish was expressed nor attempt made to overpower the suicidal inclination, and the greatest industry and ingenuity were exercised by the parties to effect their purpose. In two cases the propensity was subdued by proper medical and moral treatment, but, just in proportion to its being suppressed did the idea of suicide appear to fix itself resolutely in the mind. The desire came upon the individual like the attacks of intermittent fever.

A. K., a man aged 57, was twice married. He was a shoemaker by trade, but, not having received any education, his wife was compelled to keep all his accounts. He had experienced, when young, a blow on the head, which occasionally gave him pain. He became very intemperate in his habits, and at particular intervals he exhibited an uncontrollable temper, quarreled with everybody, neglected his business, abused his wife, and became extravagant and melancholy. During the paroxysm he would exclaim: "Oh, my unlucky head! I am again a lost man!" When the attack subsided he returned to his business, was affectionate to his wife and family, most humbly begged for her pardon for having ill-treated her, and expressed the greatest contrition for his conduct. These attacks came at regular intervals. He procured a piece of rope for the purpose of hanging himself, and for some months carried it about with him in his pocket for that purpose. During one of his fits he effected his object. His grandfather had strangled himself, and his brother and sister had attempted suicide.

DANGEROUS EFFECT OF FALSE PRIDE.

A common cause of suicide is a feeling of false pride. Owing to the ridiculously false views which are taken of worldly honors, the idea which a sickly sentimentality infuses into the mind, this feeling is engendered, to an alarming extent, through the different ranks of society. This constitutes one great element which is undermining and disorganizing our social condition. A fictitious value is affixed to wealth and position in the world; it is estimated for itself alone, all other considerations being placed out of view.

We can not conceive how this evil is to be obviated, unless it be possible to revolutionize the ideas which are generally attached to fame and worldly grandeur. It is difficult to persuade such persons that the end of fame is merely

> "To have, when the original is dust,
> A name, a wretched picture, and worse—bust."

There is a nameless, undefinable something, that the world is taught to sigh after, is always in search of, a moral *ignis fatuus*, which is dazzling to lead it from the road which points to true and unsophisticated happiness.

Among the causes which operate in producing the disposition to commit suicide, we must not omit to mention those connected with erroneous religious notions. M. Falret justly remarks that the religious systems of the Druids, Odin, and Mahommed, by inspiring a contempt for death, have made many suicides. The man who believes that death is an eternal sleep scorns to hold up against calamity, and prefers annihilation. The skeptic also often frees himself by self-destruction from the agony of doubting. The maxim of the Stoics, that the man should live only so long as he ought, not so long as he is able, is, we may observe, the very parent of suicide.

The Brahmin, looking on death as the very entrance into life, and thinking a natural death dishonorable, is eager at all times to get rid of life. The Epicureans and Peripatetics ridiculed suicide as being death caused by fear of death.

M. Falret, however, goes perhaps too far when he asserts that the noble manner in which the gladiators died in public not only familiarized the Romans with death, but rendered the thoughts of it rather agreeable than otherwise.

Misinterpretations of passages of Scripture will sometimes lead those who are piously inclined to commit suicide. M. Gillot hung himself at the age of 75, having left in his own handwriting the following apology: "Jesus Christ has said that when a tree is old and can no longer bear fruit it is good that it should be destroyed." (He had more than once attempted his life before the fatal act.) Dr. Burrows attended a nobleman who, for fear of being poisoned, though he pretended it was in imitation of our Saviour's fast, took nothing but strawberries and water for three weeks, and these in very moderate quantities. He never voluntarily abandoned his resolution. He was at length compelled to take some nutriment, but not until inanition had gone too far; and he died completely attenuated. When sound religious principles produce a struggle in the mind which is beginning to aberrate, the contest generally ends in suicide.

CLIMATE AND ITS EFFECT ON SUICIDE.

Among the causes of suicide the foggy climate of England has been brought prominently forward. The specious and inaccurate conclusions of Montesquieu on this point have misled the public mind. The climate of Holland is much more gloomy than that of England, and yet in that country suicide is by no means common. From the following tabular statement we see that the popular notion of the month of November being the "suicide month" is founded on erroneous data. The average number of suicides in each month for years may be taken as follows:

January	213	July	301
February	218	August	296
March	275	September	246
April	374	October	198
May	328	November	131
June	336	December	217
Total			3,133

It has been clearly established that in all the European capitals, when anything approaching to correct statistical evidence can be procured, the maximum of suicide is in the months of June and July, the minimum in October and November. Temperature appears to exercise a much more decided influence than the circumstances of moisture and dryness, storms or serenity.

M. Villeneuve has observed a warm, humid and cloudy atmosphere to produce a marked bad effect at Paris, and that so long as the barometer indicated stormy weather this effect continued. Contrary, however, to the opinion of Villeneuve, it appears that by far the fewer number of suicides occur in the autumn and winter at Paris than in the spring and summer.

When the thermometer of Fahrenheit ranges from 80 to 90 degrees, suicide is most prevalent. The English have been accused of being the beau-ideal of suicide people. The charge is almost too ridiculous to merit serious refutation. Suicide is not an offense that can be deemed cognizable by the civil magistrate. It is to be considered a sinful and vicious action. To punish suicide as a crime is to commit a solecism in legislation. The unfortunate individual by the very act of suicide places himself beyond the vengeance of the law. He has anticipated its operation. He has rendered himself amenable to the highest tribunal, namely, that of his Creator. No penal enactment, however stringent, can affect him. What is the operation of the law under these circumstances? A verdict of *felo-de-se* is returned, and the innocent relatives of the suicide are disgraced and branded with infamy, and that, too, on evidence of an ex parte nature. It is unjust, inhuman, unnatural and unchristian that the law should punish the innocent family of the man who in a moment of frenzy terminates his own miserable existence. It was clearly established before the alteration of the law respecting suicide, the fear of being buried in a cross-road and having a stake driven through the body had no beneficial effect in decreasing the number of suicides, and the verdict of *felo-de-se* now occasionally returned is productive of no advantage whatever, and only injures the surviving relatives.

If the view which we have taken of the cause of suicide be a correct one, no stronger argument can be urged for the impropriety of bringing the strong arm of the law to bear upon those who court a voluntary death. In the majority of cases it will be found that some heavy calamity has fastened itself upon the mind, and the spirits have been extremely depressed. The individual loses all pleasure in society, hope vanishes, and despair renders life intolerable and death an apparent relief. The evidence which is generally submitted to a coroner's jury is of necessity imperfect, and although the suicide may, to all appearance, be in possession of his right reason, and have exhibited at the moment of killing himself the greatest calmness, coolness and self-possession, this would not justify the coroner or the jury in concluding that derangement of mind was not present.

MINDS OF SELF-MURDERERS DISTORTED.

If the mind be overpowered by "grief, sickness, infirmity, or other accident," as Sir Matthew Hale expresses it, the law presumes the existence of lunacy. Any passion that powerfully exercises the mind, and prevents the reasoning faculty from performing its duty, causes temporary derangement. It is not necessary in order to establish the presence of insanity to prove the person to be laboring under a delusion of intellect—a false creation of mind. A man may allow his imagination to dwell upon an idea until it acquires an unhealthy ascendency over intellect, and in this way a person may commit suicide from an habitual belief in the justifiableness of the act. If a man, by a distorted process of reasoning, argues himself into a conviction of the propriety of adopting a particular course of conduct without any reference to the necessary result of that train of thought, it is certainly no evidence of his being in possession of a sound mind. A person may reason himself into a belief that murder, under certain circumstances not authorized by the law, is perfectly just and proper. The circumstances of his allowing his mind to reason on the subject is a prima facie case against his sanity. At least it demonstrates a great weakness of the moral constitution. A man's *morale* must be in an imperfect state of development who reasons himself into the conviction that self-murder is under any circumstances justifiable.

We dwell at some length on this subject, because we feel assured that juries do not pay sufficient attention to the influence of passion in overclouding the understanding. If the notion that in every case of suicide the intellectual or moral faculties are perverted, be generally received, it will at once do away with the verdict of *felo-de-se*. Should the jury entertain a doubt as to the presence of derangement—and such cases may present themselves—it is their duty, in accordance with the well-known principle of British jurisprudence, to give the person the benefit of that doubt, and thus a verdict of lunacy may be conscientiously returned in every case of this description.

Having, we think, clearly established that no penal law can act beneficially in preventing self-destruction—first, because it would punish the innocent for the crimes of the guilty, and, secondly, that, owing to insanity being present in every instance, the person determined on suicide is indifferent as to the consequences of his action—it becomes our province to consider what are the legitimate means of staying the progress of an offense that undermines the foundation of society and social happiness.

If we are justified in maintaining that the majority of the cases of suicide result from a vitiated condition of the moral principle, then it is certainly a legitimate mode of preventing the commission of the offense to elevate the character of man as a moral being. It is no legitimate argument against this position to maintain that insanity in all its phases marches side by side with civilization and refinement; but it must not be forgotten that a people may be refined and civilized, using these terms in their ordinary signification, who have not a just conception of their duties as members of a Christian community. Let the education of the heart go side by side with the education of the head; inculcate the ennobling thought, that we live not for ourselves, but for others; that it is an evidence of true Christian courage to face bravely the ills of life, to bear with impunity "the whips and scorn of time, the oppressor's wrong, and the proud man's contumely," and we disseminate principles which will give expansion to those faculties that alone can fortify the mind against the commission of a crime, alike repugnant to all human and Divine laws,

> "And make us rather bear the ills we have,
> Than fly to others that we know not of."

CHAIRMAN'S ADDRESS.

Read in the Section on Diseases of Children, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY EDWARD H. SMALL, A.M., M.D.
PITTSBURG, PA.

We are met together in the sixteenth annual meeting of the Section on Diseases of Children, which was the sixth Section to be formed in the AMERICAN MEDICAL ASSOCIATION.

This Section was organized under the chairmanship of Dr. S. C. Busey of Washington, in the city of New

York, in 1880, with an attendance of about forty members. At this first meeting but five papers were read, and the discussion was carried on by some ten gentlemen. Since then the fortunes of the Section have varied. At one time, interest in it had so declined that a motion was offered that the Section be done away with. Fortunately, this motion was not passed.

The best meeting that the Section ever held was that in Milwaukee in 1893. The program arranged for this present meeting has been gotten up to as great an extent as possible on the lines of the Milwaukee one.

Although the report of the Committee on Revision of the Constitution was not adopted at the meeting in San Francisco last June, still it has been thought best to follow the provisions of the proposed revision, as much as possible, in making arrangements for this present meeting of our Section. Accordingly I shall appoint at the close of this first session a Nominating Committee, consisting so far as may be, of ex-chairmen of the Section who are present. This committee is expected to make its report at tomorrow's afternoon session. It will then report nominations for chairman and secretary.

The Executive Committee is composed of the three last chairmen of the Section.

Provision has been made to have all the papers and discussions of the Section, together with lists of its officers and members, and the rules adopted for the conduct of its work, republished from the JOURNAL, in convenient form for preservation.

The services of a competent stenographer have been secured to take full and accurate reports of all discussions.

Letters have been sent to many physicians eminent in pediatrics throughout the country, soliciting papers for this present meeting, and it is hoped that the program made up from the papers thus obtained, and the discussions upon them will be interesting and profitable.

The rule that papers must not consume in reading more than twenty minutes, and that no member shall occupy more than fifteen minutes in the discussion of any paper or papers will be enforced.

The following resolution, adopted in 1888 was printed in the preliminary program, which was sent to all the gentlemen expected to take part in the proceedings of this Section and to others, viz.: "That in future each delegate or permanent member shall, when he registers, also record the name of the Section, if any, that he will attend, and in which he will cast his vote for Section officers." This was done in the hope that more members of the ASSOCIATION would identify themselves with our Section.

The General Business Committee of the ASSOCIATION is composed of the Executive Committee of the several Sections. This committee was created to take from the general sessions of the ASSOCIATION, much of its routine work, so that members of the ASSOCIATION can devote more time to the proceedings of the various Sections.

Would it not be well also to have but one annual address delivered before the general session of the ASSOCIATION—that of the President on the first day, and have the three other annual addresses (those on General Medicine, General Surgery and State Medicine) delivered before the Sections in which they respectively belong?

In San Francisco last year, on the first day of the meeting a motion was passed that the hour of meeting of the general session be changed from 10 A.M. to 12 M., in order that all members might be able to be present. If an annual address, not to exceed one hour's time were to be given each day at 12 M., and the regular routine business also carried out, this would not leave enough time to get lunch and then return for the afternoon Section work.

An amendment is to be voted on at this meeting, offered in 1892,—"That Thursday morning's general session be omitted, and the time be devoted to sectional work." This has the same object in view as the above suggestion.

If the three annual addresses were to be given in their respective Sections, instead of in the general sessions, then the general sessions could be held at noon each day, except the first, when the President's address is given and when the Sections do not hold any session, and the Sections could thus have a two and one-half, or three hours' session both morning and afternoon of each day.

The good to be obtained from the AMERICAN MEDICAL ASSOCIATION must come from its Sections, and all efforts should be directed to make the work of each a success.

At the Milwaukee meeting in 1893, it was moved and carried that this Section have a dinner at its next annual meeting. Unfortunately so few attended its meetings in San Francisco that the dinner was never heard of. I would be glad at any session to entertain a motion to have a dinner at our next annual meeting.

ORIGINAL ARTICLES.

THE EARLY HISTORY OF VAGINAL HYSTERECTOMY.

Delivered before the Chicago Medical Society, March 18, 1895.

BY N. SENN, M.D., PH.D., LL.D.

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Every great operation in surgery has a period of evolution of varying duration. Each marked advance in medicine and surgery is preceded by attempts which led to the elucidation of old ideas or the conception of new ones. All great discoveries are overshadowed by the labors of a host of earnest and progressive workers which ultimately crown the efforts of a favored few. Nearly all of the improvements in medicine and surgery which have characterized the present progressive age are only a repetition of the work of our professional ancestors. Many a so-called modern operation is only a recent and not always an improved edition of the operative technique as devised and described by one of the old masters. These remarks apply with special force to vaginal hysterectomy. The operation of removing the carcinomatous uterus through the vagina, so recently developed to its present state of perfection, was planned and performed by men who have long since departed, but whose names will always be intimately associated with the interesting history and gradual development of this operation.

There can be no doubt that the first ideas which led to the plan of removing a diseased uterus through the vagina were based upon the results which followed the unintentional removal of the uterus in cases of

mistaken diagnosis. All of the early operations were done for prolapse or inversion of the uterus. The idea of removing the uterus through the vagina originated with Soranus, who was a distinguished obstetrician in Rome during the reign of Emperor Hadrian. The first authenticated description of removal of the uterus through the vagina was given by Berengarius, of Bologna, in 1507. Like all of the early cases, we are ignorant as to the exact pathologic conditions for which this operation was made, but there can be no doubt that part of the uterus was removed. J. Schenck a Grafenberg (1617) relates a number of cases in which the uterus was removed through the vagina, in whole or in part, by ignorant persons who had not the faintest ideas as to the nature of the difficulty or of the extent and gravity of the operation. In 1792 Laumonier removed an inverted uterus below a ligature. The patient died six weeks after operation. The post-mortem showed cicatricial obliteration of the vagina, absence of the uterus; the ovaries and tubes were found on the side of the rectum. Baudelocque examined the specimen later and found that the inversion was caused by an intra-uterine growth and explained that the operation was limited to the removal of the tumor, and that the uterus was removed later by the application of a ligature which opened the peritoneal cavity and caused the fatal suppurative peritonitis. Beyerlé, on the other hand, asserted that the entire uterus was removed at the first operation. Other cases of vaginal removal of the inverted uterus, with or without the presence of a uterine tumor, have been reported by Bardol, Marc-Antoine, Petit de Lyon and Widmann. Cases of unintentional, partial or complete vaginal hysterectomy are also related by Sclevogt, J. Ramsbotham, Figuet and Blasius. Instances of partial or complete removal of the uterus in which the organ was rudely removed by midwives have been reported by Hildanus (1646), Wrisberg (1785) and Bernhard (1824). In the case reported by Bernhard the inverted uterus was removed by the midwife with a razor, the profuse hemorrhage was controlled by the introduction of fragments of ice into the vagina, and the woman recovered.

Cases of intentional removal of the uterus by surgeons have been recorded by Zwinger, Vieussen, Baxter, Faivre, Alexander Hunter, Joseph Clarke and Johnson. In Zwinger's case the amputation was made soon after delivery after preliminary ligation. Death two days after operation. The post-mortem showed that the middle portion of the uterus had been removed. In Baxter's case the uterus was amputated in the same manner five weeks after delivery. Recovery six weeks after operation. Faivre applied a ligature to the recently inverted uterus which sloughed and was detached on the twenty-seventh day after ligation, followed by recovery of the patient.

Johnson cut off the uterus below the ligature and his patient made a good recovery. In a second case of recent inversion of the uterus, the same surgeon applied a ligature to control the profuse hemorrhage. The hemorrhage ceased and the ligature was removed two days later. The hemorrhage returned, when the uterus was again ligated, and fourteen days later the fundus and tubes were detached in the form of a slough, after which the patient made a satisfactory recovery.

Windsor (1819) operated on a case of chronic inversion by tying a silk ligature around the uterus. He tightened the ligature more firmly every evening and on the twelfth day after the ligature had cut its way nearly through the tissues, he cut off the uterus below the ligature without incurring any hemorrhage. The specimen removed was three inches in length and consisted of the uterus, round ligaments and a portion of the tubes and ovaries. After a protracted illness the patient ultimately made a favorable recovery. In Weber's case the inversion was caused by an intra-uterine tumor, hastened by a midwife, who made an attempt to remove the tumor by traction. Weber ligated the fundus of the uterus, tightened the ligature daily, and cut off a piece below it four and one-quarter inches in diameter, and an inch and a half in length. The specimen removed contained portions of the tubes. Eight days after the application of the ligature the ligated mass sloughed off. The woman recovered without any untoward symptoms and remained in good health a year after the operation.

Rheineck operated on a similar case. The patient was a multipara, 41 years of age. The entire uterus was removed by the use of a ligature. A careful examination after recovery of the patient showed no trace of the uterus. In many of the cases operated upon before 1800, the diagnosis was uncertain, but in most instances the operation was performed for simple or complicated inversion of the uterus.

Vaginal hysterectomy for malignant disease of the uterus dates back to the year 1812, when Paletta appears to have removed the entire organ. The extent of the disease is unknown, but the tumor occupied the lower segment of the uterus. Paletta did not know that he extirpated the entire uterus until he examined the specimen after the completion of the operation. The patient suffered for nine months from pain in the back and hips and a copious serosanguinolent vaginal discharge. The cervical portion of the uterus was the seat of an ulcerating tumor. The operation was performed April 13, 1812. By the use of obstetric forceps and the hand, the uterus was brought down to the vaginal outlet. The upper part of the vagina was incised with a pair of curved scissors. After separating the lower segment of the uterus a hard body could be felt at the base of the tumor. This hard body proved to be the fundus of the uterus which remained in connection with the tumor. The patient died at the end of the third day. Paletta did not intend to remove the entire uterus with the tumor, and the extent of the operation became evident only after the completion of the operation upon careful examination of the specimen removed. The more general use of improved vaginal specula about the beginning of the nineteenth century enabled the surgeons to make an earlier and more accurate diagnosis in affections involving the vaginal portion of the uterus and rendered the organ more accessible to direct surgical intervention. To Osiander, of Göttingen, more than to any one else, belongs the credit of popularizing the use of the vaginal speculum as a diagnostic resource and as an aid in operations upon the lower segment of the uterus. As early as 1808 he resorted to the speculum and curved scissors in the removal of uterine polypoid growths. To the same surgeon also belongs the honor of having devised and practiced for the first time, supravaginal amputation of the carcinomatous cervix uteri. The first operation of this kind he performed in 1801. The carcinomatous cervix as large as a child's head,

which filled the vagina, was drawn through the vaginal outlet with a pair of Smellie's obstetric forceps. The greater part of the tumor was torn away from the cervix, an accident which was followed by profuse hemorrhage. As the uterus could no longer be drawn down by the use of forceps, he inserted, with curved needles, four traction sutures at the vaginal insertion, placed at an equal distance apart. The needles and sutures were brought out through the cervical canal at a level corresponding with the internal os. By gradual and careful traction upon the sutures, the lower segment of the uterus was brought down to near the vaginal outlet. With Pott's fistula knife the carcinomatous cervix was then amputated. The hemorrhage, which was quite profuse, was controlled by applying a sponge dusted over with a styptic powder. The patient was convalescent four weeks after the operation. The experience with this case led him to devise another method to enable him to render the uterus more accessible in cases in which the cervix was so much diseased that it could not be drawn down by the use of forceps or traction sutures. This modification of his first procedure consisted in grasping the cervix with the fingers of one hand and pressure of the hand of an assistant upon the abdominal wall above the uterus, and removal of the cervix with curved scissors. For the purpose of removing carcinomatous tissue from the cavity of the uterus he invented a curved chisel. The application of Smellie's obstetric forceps, as an aid in performing vaginal hysterectomy, led to the invention of traction forceps by Museux and Récamier. The reports of Osiander's attempts to remove the carcinomatous uterus through the vagina soon reached France, and his operative procedures were modified by Dupuytren, Lisfranc and other French surgeons.

Dupuytren dragged the uterus toward the introitus vaginæ with tenaculum forceps and amputated the cervix with curved scissors. Lisfranc exposed the cervix with the aid of a bivalve speculum, grasped it with his tenaculum forceps, removed the speculum and by gradual traction brought the diseased part within easy reach. In the case of fungous growth he used the fingers of the left hand in making pressure against the blades of the forceps to prevent tearing. The amputation was made with a curved bistoury guided by the fingers of the left hand.

Hatin used a bivalve speculum and a traction forceps of his own invention, the teeth of which grasped the interior of the uterus as well as the external surface of the vaginal portion. Forceps of a complicated structure for vaginal hysterectomy were also devised by Canella and Colombat. The results of partial vaginal hysterectomy for carcinoma, as practiced by Osiander and his immediate followers, were as could be expected most discouraging. Osiander's cases, twenty-three in number, died sooner or later after the operation. The work of the French and Italian surgeons yielded no better results. In all of the cases the diagnosis was made and the operations done long after the disease had passed beyond the limits of the parts removed. A speedy local recurrence and death within a year after the operation were constant occurrences in all of the cases. The local and regional dissemination of carcinoma of the uterus were not well known at that time and the operative procedure was usually limited to the part of the tumor and uterus which projected into the vagina.

Dupuytren reported twenty-nine cases of vaginal removal of the carcinomatous cervix with fifteen deaths, but a later report by Pauly left only one recovery. The unsatisfactory results of the operation induced Dupuytren later to abandon it almost entirely and to substitute for it the potential cautery. The authenticated history of intentional complete extirpation of the uterus for carcinoma dates back to 1813. In 1810, Wrisberg discussed the propriety and feasibility of vaginal hysterectomy in a prize essay read before the Vienna Royal Academy of Medicine. Two years later, Paletta removed the uterus through the vagina for carcinoma. He did not intend to remove the entire uterus, and the fact that the entire organ had been removed only became apparent after the completion of the operation by a careful examination of the specimen removed.

The first deliberate and well-planned vaginal hysterectomy for carcinoma was made in 1813 by J. C. M. Langenbeck, of Göttingen, the uncle of the late distinguished surgeon B. von Langenbeck. The paper of Wrisberg and Paletta's case encouraged him to undertake this difficult task. His patient was a Mrs. Oberschein, 50 years of age, the mother of several children, with the general health but little impaired. She had suffered for some time with a lancinating pain and a burning sensation in the region of the uterus. The uterus had gradually descended toward the vaginal outlet. The suffering became so severe that the patient begged for an operation. Uterus prolapsed. On examination the cervix was found of a stony hardness, nodular and ulcerated. The cervical canal very vascular, ulcerated and from it escaped a bloody and exceedingly fetid discharge. The irritating vaginal discharge had caused erosions of the external genital organs. The ulceration of the cervical canal extended deeply into the cavity of the uterus. Digital exploration of the cervical canal and uterine cavity revealed an ulcerated surface with great induration of the cervix and body of the uterus, and was followed by free hemorrhage. Through the inverted vagina the uterus could be felt as a firm body which could also be distinctly felt by rectal examination. As Langenbeck had no precedent to follow, he had to devise his own plan for the removal of the entire uterus upon which he had decided. The operation was performed in the following manner: the patient was placed with the pelvis upon the edge of the bed with the thighs separated and the feet resting upon two stools. The operator properly seated between the thighs dissected the vagina from the cervix, the dissection was continued until the peritoneal envelope of the uterus was reached. The dissection was made with special care not to open the peritoneal cavity by directing the edge of the knife against the uterus; and separating the tissues as far as this could be done with the handle of the scalpel. To reach the fundus of the uterus, the broad and round ligaments and the Fallopian tubes had to be divided. In his first report of this case he maintained that he removed both ovaries with the uterus, but from later information gained by examination of the specimen and repeated examinations of the patient, he corrected this statement. Two round hard excrescences connected with the uterus gave rise to this wrong impression. The last part of the operation consisted in the subperitoneal enucleation of the fundus of the uterus. He had no one to assist him except a gouty surgeon who, when called upon to render much

needed aid, could not rise from his chair. Toward the end of the operation the hemorrhage became alarming, when the following conversation, occurred: Langenbeck: "*Herr, so humpeln Sie doch jetzt herbei.*" Assistant: "*Ich kann nicht.*" With severe hemorrhage and approaching collapse of the patient and no one to assist him, prompt action on the part of the operator became a matter of urgent necessity. With the left hand, Langenbeck grasped and compressed the bleeding part, and with the right hand he passed a needle armed with a ligature through the tissues behind the bleeding point. Having only one hand at his disposal the ligature was tied by grasping one end between the teeth and the other with the right hand. At this stage the patient appeared to be dying. Dashing cold water over the face revived her. The long wide vagina was now pushed in an upward direction by introducing the whole hand. Above the vagina was a deep pocket, the walls of which were composed of the peritoneal investment of the uterus. Vagina and peritoneal pouch were continuous with each other and no opening into the peritoneal cavity could be detected. Through the peritoneum the intestinal coils could be distinctly felt. To prevent the inversion of this peritoneal bag by pressure against it of the intestines, a sponge was inserted. In spite of the critical condition of the patient at the close of the operation she made an uneventful recovery. If we remember that this, the first complete vaginal extirpation of the carcinomatous uterus was made without an anesthetic, without assistance, and without the use of hemostatic forceps, we can easily conceive the difficulties which the operator encountered and grant him willingly the well merited and hard won honor of having established an important surgical operation. Langenbeck's trials, however, only began at the completion of the operation. Death of the patient would have brought him undeserved censure; her recovery excited the envy of his colleagues which followed him to his grave.

The history of medicine and surgery is replete with similar incidents. The originator of every marked improvement in medicine and surgery has, during his lifetime, received but little recognition for his labors on part of his colleagues. Professional jealousy has always selected for its target the men conspicuous by their honest, unselfish work. Langenbeck's report of his successful operation aroused doubt and a bitter criticism among his contemporaries. Upon his return from Cassel, where the operation was performed, he visited his friend Osiander, and related to him the particulars of the operation. Osiander doubted the possibility of complete removal of the uterus and adnexa without opening the peritoneal cavity, as was first claimed by Langenbeck, and said that he would advise all of his patients who desired to have the uterus enucleated to consult Langenbeck.

Jörg doubted the veracity of the description of the operation. Langenbeck invited his friends to examine the patient after her recovery. The invitation was accepted by Mende and von Siebold. Mende made the examination twelve years after the operation. The patient was in perfect health at that time, and the most careful examination satisfied Mende that the entire uterus had been removed. Von Siebold made the examination Oct. 4, 1829. He indorsed the statements made by Mende in every respect. The testimony furnished by his trusted friends did not succeed in allaying the suspicions of a doubtful profession. Unfortunately the specimen was lost at the time of operation and could not, therefore, be utilized to verify and support Langenbeck's claims. His assistant died soon after the operation, and his testimony was, therefore, not available to substantiate the operator's position. Nothing was left for Langenbeck to do but to await patiently the opportunity to fortify himself by the results of a post-mortem examination upon his patient. The patient died of senile marasmus June 17, 1839, twenty-six years after the operation. The post-mortem was made by Dr. Neuber in the presence of three other prominent physicians. The bladder, rectum and vagina were removed together and placed in alcohol. No adhesions were found in the abdominal cavity and no signs of recurrence in any part of the body. The specimen is described in Max Langenbeck's dissertation, "*De totius uteri extirpatione*," Göttingen, 1842. The upper part of the vagina and the empty peritoneal pouch formed by the enucleation of the uterus were found inverted and formed a swelling in the vagina which reached as far as the labia majora. Inspection of the peritoneal surface showed the Fallopian tubes, their cut ends terminating in the peritoneal pouch. The inverted pouch appeared between rectum and bladder as a globular depression, the surface of which did not show signs of scar tissue anywhere. Langenbeck places great stress on the peritoneal hernial protrusion, as a positive demonstration that the uterus was enucleated without opening the peritoneal cavity. Both ovaries were found in their normal relations with the fimbriated extremities of the tubes. The description of the operation as given by Langenbeck is corroborated by the results of the post-mortem, and the case will always remain in history as the first intentional complete vaginal extirpation of the uterus.

The second complete extirpation of the uterus per vaginam was performed by Sauter Jan. 28, 1822. Billroth and others have repeatedly wrongly quoted Sauter's name as the originator of the operation of vaginal hysterectomy when, as the records show, his operation was performed nine years later. Sauter's case differs from Langenbeck's, in that the uterus was not prolapsed and the peritoneal cavity was freely opened during the operation. The patient was 50 years of age, and the cervix was found extensively ulcerated. Sauter intended to make an artificial prolapse, as suggested by Wenzel, by the employment of tenaculum forceps, and then remove the uterus by enucleation after the example of Langenbeck. In the attempt to bring the uterus down with the curved index finger, the papillomatous excrescences broke off, which gave rise to considerable hemorrhage. The vagina was now cut off from the cervix by a circular incision and another attempt made to bring the uterus down by traction forceps, one blade of which was inserted into the cervical canal and the other placed upon one side of the cervix. Making in this manner strong traction upon the uterus, the attempt was made to separate the bladder from the uterus by the finger and handle of scalpel, but this did not succeed. The piece of the cervix grasped with the forceps was torn off and after working for half an hour he concluded to remove the uterus in its position by the use of a curved scalpel. Two fingers of the left hand served as a guide to the knife, and with it the uterus was detached from the bladder. The whole hand was then

inserted into the peritoneal cavity, and with it the fundus of the uterus was seized. In the attempt to draw the uterus down, the intestines escaped and, after replacing them, a repetition of the same manipulation caused the same accident. He finally succeeded in dragging the fundus of the uterus through the opening after which it was separated from the remaining attachments. The intestines did not prolapse after the removal of the uterus; urine escaped involuntarily. The opening contracted into a funnel-shaped space with the apex directed upward. A few days later urine escaped through the vagina, showing that the bladder had been injured during the operation. After closure of the peritoneal cavity the opening in the bladder was discovered. The patient recovered from the immediate effects of the operation, but died on June 31 of the same year.

The post-mortem showed that the peritoneal cavity was closed. A large opening in the posterior wall of the bladder communicated with the vagina. A number of limited intestinal adhesions, ovaries in their normal location, tubes indistinct.

The experience with this case led Sauter to make the following suggestions: horizontal position of the patient; complete evacuation of rectum and bladder. Pressure by the hand of an assistant over the abdomen above the pubes in the direction of the pelvis. Incision of vaginal vault between uterus and bladder with scalpel with a short convex blade. Enlargement of this opening around the whole cervix with the same knife. Section of the broad ligaments close to the uterus with curved scissors, guided by the fingers. Separation of uterus from the rectum with curved scissors; at last, bringing down of the uterus with the whole hand and separation of remaining attachments.

The third complete vaginal extirpation of the uterus was made by Elias von Siebold, April 19, 1823. The patient was 38 years old. To prevent injury to the bladder, a catheter was inserted and held in place by an assistant. The same assistant compressed the abdomen above the pubes in the direction of the pelvis. The vaginal vault close to the cervix was incised with Savigny's fistula knife, first on the right side of the cervix, guided by the two fingers of the left hand. The opening was then enlarged sufficiently for the introduction of a finger; after this, section of the vaginal insertion all around and close to the cervix; the broad ligaments were divided between two fingers close to the uterus with a small pair of polypus scissors. The uterus was now detached on the right side. To effect this also on the left side, two fingers of the right hand were inserted, and using them as a guide the opposite side was separated with Savigny's knife and Osiander's chisel. A finger was now inserted into the cervix, and with another pressure made from without, whereupon the remaining attachments of the vaginal vault on the right side were torn and the uterus slipped from between the fingers. The intestines could be felt, but did not prolapse. The uterus was now so high that it could only be felt with the tips of the fingers. Attempts to bring it down by the insertion of the assistant's fingers into the rectum and the use of Boer's excerebration forceps proved a failure. The operator satisfied himself that the only way in which the uterus could be brought down would be by the insertion of the whole hand into the peritoneal cavity. As the vaginal entrance was too narrow, the perineum was incised. The opening in the vaginal vault had also to be enlarged, which was done with Savigny's knife. The hand was now inserted, the fundus of the uterus grasped, and the organ drawn down into the vagina, after which the left broad ligament was divided in the same manner as on the opposite side. Death sixty-five hours after the operation. The post-mortem showed inflammation of the small intestines; fibrous exudations upon the peritoneal surfaces; rectum and bladder intact.

The second case, operated upon after Sauter's method, was by Holscher Feb. 5, 1824, a patient upon whom Prael had performed previously Osiander's operation. The patient was placed in the dorsal horizontal position upon an obstetric chair. As the uterus could not be brought down with the hand and a brass needle twelve inches in length, the carcinomatous cervix was excised in order to reach the fundus of the uterus more readily. The vaginal vault and the broad ligaments were divided with an amputating knife, guided by two fingers, close to the uterus; first on one side, then on the other. Death in less than twenty-four hours.

Wolff operated according to Sauter's method May 5, 1824. The patient was 60 years of age and insane. In this case the operation was greatly facilitated by complete prolapse of the carcinomatous uterus and inversion of the vagina. The incision of the vaginal vault was first made in front, then on both sides. The ligaments and tubes were then brought forward and divided some distance from the uterus, after which the uterus was separated from the rectum. The wound was sutured and the inverted vagina replaced. Death two days after operation.

In 1830 Delpech combined vaginal with abdominal hysterectomy, being five years later than Langenbeck's first laparo-hysterectomy. At the vaginal vault Delpech incised the tissues between the bladder and cervix with a knife of his own invention. The separation of the loose connective tissue and the tearing of the peritoneum was done with the finger. After enlarging the opening sufficiently to insert two fingers the abdomen was opened above the pubes by making first an oval skin flap, after which the linea alba and peritoneum were incised. The operator then inserted a finger through the wound between uterus and bladder, which was used as a guide in dividing the broad ligaments, after which the uterus could be sufficiently mobilized from above to sever the remaining attachments safely.

The fifth total extirpation of the uterus after Sauter was made by Elias von Siebold upon a patient 30 years of age July 25, 1825. He rendered the uterus more accessible prior to dividing the broad ligaments by passing a silver needle with a steel point armed with a strong thread through the cervix, using the thread as a guy rope. The patient died two days after the operation.

The sixth total vaginal hysterectomy for carcinoma was made by Langenbeck upon a servant, 28 years of age, August 5, 1825. As a preliminary step, the perineum was incised for the purpose of widening the vaginal opening sufficiently to permit the introduction of the whole hand to grasp the uterus before the division of the right broad ligament. After placing the index finger of the left hand in the vaginal vault between the cervix and the rectum, it was utilized as a guide to Osiander's hysterotome, with which an incision was made into the pouch of Douglas. This

opening was dilated until the whole hand could be introduced with which the fundus was grasped, and pressed in a downward direction, placing the broad ligaments on the stretch. After section of the right broad ligament, the uterus could be brought down beyond the rima pudendi, which made it easy to divide the remaining attachments. He places great stress on opening the peritoneal cavity behind and not in front of the uterus, as by doing so the bladder is exposed to less risk of being injured. He also insists that the large pelvic vessels should be protected by making the incisions close to the uterus. As an additional safeguard to protect the bladder and the urethra, a catheter is held in proper position in the bladder by an assistant. The hemorrhage was not severe. After the completion of the operation a sponge was inserted into the vagina, and for the abdominal pain twenty leeches were applied without any material benefit following. The patient died on the second day. The post-mortem revealed that the small intestines in the pelvis were covered by coagulated blood and a plastic exudate.

The seventh total vaginal extirpation of the uterus after Sauter was made by Récamier, July 26, 1829, which, according to Gendrin, was the first operation of this kind in France. He modified Sauter's procedure only in so far that he ligated the uterine arteries in the lower part of the broad ligaments before dividing them higher up. His patient was 50 years of age. With two tenaculum forceps he gradually brought the carcinomatous cervix as far as the vulva. The vagina in front of the cervix was incised with a probe-pointed bistoury (convex), and with the index finger the loose connective tissue between bladder and cervix separated as far as the peritoneum. The opening was enlarged with the bistoury sufficiently to enable him to insert two fingers; the peritoneal cavity being opened, the fundus of the uterus was grasped and the upper part of the broad ligaments was then divided one-third from above downward, without causing much hemorrhage, after which between thumb and index finger the lower part of the broad ligament, first on the right, and afterward on the left side, was seized and with a curved tunneled needle armed with a ligature, the ligament was transfixed and tied, thus securing the uterine arteries. The broad ligaments were then divided above the ligature. The uterus could now be brought out of the vagina and its attachments with the rectum were easily separated. The operation was completed in twenty minutes. Complete healing of the wound twenty-seven days after operation.

The eighth vaginal extirpation of the entire uterus was made by Langenbeck, August 18, 1829. This was his fourth complete extirpation of the uterus, and his third *per vaginam*. It differed from his preceding cases in that the Douglas pouch was opened first and the uterus removed piecemeal to the fundus, which did not appear to be diseased. Hemorrhage slight. The patient recovered from the immediate effects of the operation, but died on the eleventh day. Intestines reddened in places. Only a small fragment of the fundus remained. A rectal fistula with irregular margins was found as the immediate cause of the fatal peritonitis.

The ninth complete vaginal removal of the uterus was performed by Roux, Sept. 20, 1830. The patient was 50 years old and the method employed Récamier's. Death soon after the operation. The same surgeon performed his second operation five days later, following the same plan with a similar result.

The eleventh vaginal extirpation of the uterus was performed by Récamier Jan. 13, 1830, upon a woman 35 years of age. At the completion of the operation the intestines escaped into the pelvis; they were reduced and the wound sutured. The patient died on the second day from what was believed to be secondary hemorrhage from the internal spermatic artery.

Blundell made the twelfth vaginal hysterectomy Oct. 16, 1830. The woman was 47 years old. Cervix much enlarged and ulcerated. Patient's general health greatly impaired. The uterus was exposed with the rectal speculum of Weiss, which was removed after grasping the cervix with tenaculum forceps. After bringing the uterus well down into the vagina a second forceps was applied, and by an assistant making traction upon both of them the uterus was brought within easy reach. An incision was made between the cervix and rectum with an ordinary scalpel, after which the opening was enlarged with a probe-pointed bistoury. The next step in the operation consisted in making a transverse incision in front of the cervix, separation of uterus from bladder, during which the latter was opened. The fundus of the uterus was grasped with the hand, and into it was inserted a sharp hook, with which it was drawn in the direction of the vagina, after which both broad ligaments were severed. Hot fomentations and thirty leeches relieved the abdominal pain. A return of the pain was met by the application of twenty leeches. Four weeks after the operation the patient was convalescent, but the vesico-vaginal fistula remained.

Dubled suggested that after liberating the cervix by vaginal incision, and after bringing the uterus well down into the vagina by the employment of tenaculum forceps, the broad ligaments should be ligated without previous partial division, as was done by Récamier. After this has been done the uterus is so freely movable that the diseased part can be readily excised. He insisted that the operation should be limited to the removal of diseased tissue. He carried this method into effect once, but his patient died twenty-four hours after the operation. In 1839 Langenbeck performed a supravaginal amputation of the uterus for carcinoma. The patient was 44 years old. The cervix was grasped with two volsellum forceps, and by continued traction it was brought down to the vulva. A circular incision around the cervix was made and the dissection carried upward extraperitoneally as far as the body of the uterus, where the amputation was made. The patient made a good recovery, and at the time she left the hospital the wound was completely cicatrized.

I have given you this brief outline of the early history of vaginal hysterectomy, to show the value of a retrospective view in these times of unrest in medicine and surgery. In the laudable ambition to devise new operative procedures, the surgeons of the present day often ignore the work of our forefathers. New operations are devised and described which were conceived and practiced, or, at least, recommended years ago. Honesty and justice demand that credit should be given to whom it belongs. From what I have said it is evident that the uterus has been removed through the vagina for inversion and prolapse for more than a century. The credit for removing the carcinomatous cervix by the same route unquestionably belongs

to Osiander. This operation was later improved by M. Langenbeck, who made, for the first time, the supravaginal amputation of the cervix for carcinoma in 1830, an operation which was later revived and popularized by Schroeder. Langenbeck and Sauter were the pioneers in establishing vaginal hysterectomy for carcinoma. Langenbeck enucleated the uterus in 1813 and his patient recovered and finally died of senile marasmus at the age of 84. Sauter removed the entire uterus *per vaginam* successfully in 1822 by an operation which, with some slight modifications, is practiced to-day. Of the first twelve cases of complete vaginal hysterectomy, only three recovered, a mortality of 75 per cent. Extraperitoneal enucleation of the uterus has recently been described as a new operation, but those conversant with the history of surgery will always link Langenbeck's name with the origin of this operation. The great mortality which attended the first attempts to remove the uterus through the vagina were due to hemorrhage and infection. The improved means and technique in prophylactic hemostasis and the introduction of aseptic surgery encouraged Czerny to revive and improve vaginal hysterectomy in 1878. Since that time the operation has been modified in various ways, and has now become an established procedure in the treatment of well selected cases of carcinoma of the uterus, but the honest student will always connect the early history of this operation with the names of Osiander, M. Langenbeck and Sauter.

LITERATURE ON THE EARLY HISTORY OF VAGINAL HYSTERECTOMY ARRANGED IN CHRONOLOGICAL ORDER.

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BRIGHT LIGHT IN THE SCHOOL ROOM A CAUSE OF MYOPIA, AND A METHOD PROPOSED FOR THE ESTIMATION OF THE QUANTITY OF LIGHT.

Read in the Section on State Medicine, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY A. G. FIELD, M.D.

DES MOINES, IOWA.

The object of this paper is to ask attention, briefly, to the physiologic results of regular use of the eyes in bright light, and more especially to raise the question as to whether progressive myopia in school children is not attributable to a large extent to such use. Also to propose a method of estimating the quantity of light in a given place or room with some approach, at least, to mathematical exactness.

The prevalence of myopia among school children attracted the notice of observers more than thirty years ago. Cohn examined the eyes of 10,000 school children and reported over 2 per cent. myopic in the elementary departments, over 10 per cent. myopic in the intermediate departments, more than 19 per cent. myopic in the high schools, and more than 26 per cent. myopic in the gymnasium. The showing discloses an almost regular ratio of increase from the lower to the higher grades. More recent statistics show an increase since that time of from 25 to 50 per cent. in the number of myopic pupils in the higher German schools. In other words, the longer school life continues, the larger is the percentage of myopia While Germany leads the world in the intensity and persistency of school work, as she does also in the percentage of myopics, the same conditions, though in a less degree, are shown by the statistics of every civilized people.

Some country schools show as low as 5 per cent. average including 1 per cent. myopic in the elementary departments, but in all, the percentage increases rapidly with the continuance of school life. The causes assigned are: 1, bad air; 2, inheritance; 3, general debility; 4, unnatural posture; 5, use of eyes during partial congestion of the blood vessels of brain; and 6, the use of eyes upon fine print or upon

objects in too near proximity. Most of these causes are amenable to improvement to a greater or less degree, and it is fair to assume that the suggestions presented have been acted upon in the sanitary management of schools. We are, therefore, at this state of the inquiry, confronted by two circumstances which stand out very conspicuously: 1, the employment of measures suggested to remedy or diminish the prevalence of myopia; and 2, its progressive increase everywhere during school life.

Cohn placed as first in the list of causes, "bad light," meaning dim light and, as far as known, the same prominence has been given to that cause by all writers and teachers down to the present time. As a matter of course, Cohn advised more light, and that advice has been followed in the construction of school houses. He recommended one square foot of glass area to five of floor area, and he believed that if school houses should be constructed with a square foot of glass area to every square foot of floor area, that the benefits would be very marked. The proportion of glass area to floor area in school houses in my own vicinity, in some cases is as high as one to five, and the intensity of the light in them is intolerable to many eyes if exposed to it for any considerable length of time without proper shading.

Another cause of myopia named and universally admitted is the use of the eyes upon fine print or upon objects in too near proximity. During a personal visitation to many of these schools a very common custom with scholars was observed—that of laying the book flat upon the desk for study with the face over it. This position necessarily brings the eyes within from five to seven inches of the printed page, and I need not say that such position would meet with universal condemnation. The use of the eyes in this position requires shortening of focus, by increasing the convexity of the crystalline lens by a prolonged contraction of the ciliary muscle, an elongation of the eyeball because of the change in the conjugate foci of the lens; in short, a strained condition of the whole accommodative apparatus of the eye—a condition of temporary myopia. Practically the same thing happens to the eye when used in a bright light even upon distant objects, the immediate effect of which is to stimulate contraction of the pupil. In contraction of the pupil, the marginal rays—those most refracted by the lens are cut off, in effect limiting the action of the lens to its central portion, and landing the image beyond the normal position or distance. The posterior wall of the retina recedes by the action of the recti muscles to receive the image, the ball is elongated, and we have again induced or temporary myopia, just as we have in near or close vision.

The fact is best illustrated by the action of the photographic lens of the rectilinear type, in which the front combination represents the cornea and anterior chamber of the eye, the posterior combination the crystalline lens and the posterior chamber, while the retina is also represented by the ground glass screen. With a large stop, we focus upon a given object and move the screen until we have the image sharp upon it. We, then, without moving the object or screen, remove the large stop and substitute a small one. We contract the light opening in the lens, just as the pupil of the eye is contracted in viewing small objects, using the eye in near vision, or by exposing it to a bright light. We now observe the image upon the screen and find that the use of the small stop has moved the image—it is no longer sharp upon the screen, because it has receded, and we shall have to move the screen back to where the image is, to get a sharp view of it on the screen. In other words, we must elongate the camera box, just as the recti muscles elongate the eyeball in myopia, to get a sharp image upon the retina. The frequent or forced production of temporary myopia results in a condition, chronic and permanent, and too often progressive. The remedy suggests itself; a thoroughly regulated and modulated light in the school room, a proper seating and frequent interchange of pupils with reference to light, and the substitution of charts and black-boards to the greatest possible extent. for books, in the school room.

The words bright, and dim, are used in this paper as substitutes for the more commonly used words, "bad" and "good" as indicating a measure of light, and possibly they may be the better words. But after all there is a vagueness in the meaning of such words which ill becomes a study that aims at, and demands, precision in terms used, as well as in methods and results. At best, only comparative or relative degrees of intensity are expressed by such words. I therefore propose a method of estimating with a very considerable degree of exactness the intensity or quantity of light, and not only of estimating it, but of recording it. It is by the use of sensitized paper The sensitiveness of this paper depends upon the quantity of nitrate of silver contained in a given quantity of water in the bath. The standard formula is sixty grains to the ounce of water. Albuminized paper floated upon this bath and dried in the dark has a sensitiveness represented by two in the scale of a sensetometer. We have in the paper an instrument at once certain in effect, uniform in action and convenient to employ. The degree to which the paper is browned or darkened when exposed to a given light is a definite measure of the intensity of that light. I have shades of brown each resulting from exposure of different pieces of the sensitized paper one hour on a bright day, in the light of rooms in which the proportion of glass area to floor area varied from 1 to 1, to 1 to 20. (Scale color slips omitted.

By the application of this method to the determination of quantity of light in the school room, the teacher may know not only the average light value of her room, but of the various parts of it, and at various times of day on different days. With such knowledge, she will be enabled to properly regulate the light by the use of suitable shades and also to seat her pupils in such parts of the room as are best adapted to individual needs and idiosyncrasies. In placing the slips for the estimation of the light value of a room, the mean distance of the slips from the windows is to be taken as the distant line of the area estimated. A scale similar to the one here presented should in all cases be provided for comparison in the use of such slips, and the degree of browning during one hour of exposure should range only from two to four of the scale. This will represent a safe and yet sufficient light, except in special cases and for short periods of time. The slips immersed in a combined toning and fixing bath for ten minutes and then rinsed in two or three changes of clean water become permanent.

I desire it understood, however, that this paper is not for the purpose of establishing a standard of light, for school rooms, which can only be done after

careful concerted observations and experiences, but to furnish a suggestion for the formulation of such standard. Much might be said of the wide range in the diversity of school house architecture, and the imperative need for uniformity of construction upon the best and most thoroughly matured plans under State supervision, including general rules for lighting, heating and ventilating the same. This, however, would be foreign to the scope and purpose of this paper, which seeks to draw attention to two points only:

1. That the use of the eyes in bright light, so constantly recommended as prophylactic, as a matter of fact causes temporary myopia which if persisted in as a habit, or from necessity, soon becomes chronic and permanent as is shown in the history of school life everywhere.

2. That the proper use of light as of heat and other natural agencies by the animal economy requires a means for its quantitative estimation. This can be accomplished with a considerable degree of accuracy by the use of sensitized paper.

THE GOLD IN GARBAGE.

Read in the Section on State Medicine, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY DOUGLAS H. STEWART, M.D.

NEW YORK.

The quest of the Middle Ages was for the stone that would turn lead into gold, but the aim of the nineteenth century seems to be the transmutation of waste into wealth. As a natural consequence, the elaborate and expensive utilization works of Europe, and the various processes of dealing with American garbage have been established.

Everybody believes in the gold in a dust heap, but as yet it has not materialized. In the light of practical experiment it seems quite as far from realization as the philosopher's stone—also once an object of universal belief. There is not, to my knowledge, a single public municipal system that is run at a profit in the disposal of garbage, no matter what its promises on paper or in the theoretical stage have been. Every system being subsidized—or costing in operating expenses from 7 cents a ton upward to a dollar or more. Every practical test points directly to a loss, and the problem seems to present only one factor for solution, viz., "how to make this loss as small as possible." Roughly speaking, the attempts at extracting gold from garbage may be divided into four methods:

1. The most wasteful, sea disposal.
2. The most offensive, hog-feeding or fertilization.
3. The most economical to operate, reduction.
4. The most sanitary and complete, cremation.

There is still another method, proposed by an Englishman in the Leeds *Mercury*. He seriously writes about his plan—of domesticating crocodiles in England, in order to have them eat up the garbage and refuse thrown into the rivers. This is no more humorous than some of the schemes proposed for New York. For instance, bear in mind, the simple sanitary fact that water transportation and sea disposal of garbage are unqualifiedly stupid and wasteful, and repeated handlings are unnecessary and costly.

Our ex-Mayor appointed a committee of five to investigate and report on the garbage systems of the United States and England. Let me call your attention to their report which is quite as humorous as the crocodile hatchery and just as seriously intended.

1. They say: "An intolerable nuisance is created at each garbage dump, from foul odors arising from the garbage, and from the winds blowing the lighter material about, and again, while towing to sea, the escape of a considerable proportion of the material to the defilement of the harbor.

"2. Even with the most improved methods of loading, and the best character of boats, the practice of depositing the refuse at sea is reprehensible from every point of view.

"3. We believe that this material could not be deposited at sea at a less distance than two hundred miles without contaminating the Long Island beaches.

"4. The commission was very reluctant to indorse any untried system."

You see, this is all very earnestly expressed, but here comes the humor. After condemning dumps the commission suggests building new ones—instead of doing away with them altogether. After condemning sea disposal, they provide for its continuance instead of its extinction. After condemning boats, they say, let us build propellers. After setting a two hundred-mile limit—some of them now talk fifty miles. After expressing reluctance to indorse any untried system, they do indorse an untried experiment—the garbage propellers invented by one of their number. In short, either the report does not bear out the facts or the facts do not bear out the findings. I do not mean to attack the committee at all, but simply to give you an instance of how little we inconsistent islanders of Manhattan know of the scientific position of the age on the garbage problem. And you may be surprised, but I can assure you that the report of the commission was received almost without comment and quite seriously.

New York and Brooklyn still dump their ashes into the sea—and from dock to ocean the freight is very nearly $500,000. Occasionally the scows sink—thus in 1893 New York alone deposited eight boats and 2,557 cart loads of refuse, on the bottom of New York Bay. There was a bill introduced into the Legislature calling for an appropriation for dredging out the harbor.

It seems to be the fate of cities, located on islands, to become narrow and provincial in their ideas, and when once the conceit of having the "best in the world" is fairly fixed, their commercial position is on the wane. Therefore New York and Brooklyn, to-day, have nothing to teach other cities on the garbage question, except possibly what to avoid. The English cities show us the value of reductors. Some of our own neighboring towns furnish evidence in cremation, and others are living monuments to the results of the pig-feeding and fertilizer plan—but New York and Brooklyn have the most expensive method of making carrion soup on our neighbors' beaches.

Why there is not a perpetual injunction granted by the courts, I do not understand. The details of the garbage disposal of New York can be expressed in three words: nuisance, failure, and waste.

We come now to the second method: hoggery and fertilization. The hogs are killed by the broken glass in household swill, and no farmer or gardener will put domestic garbage on his land more than once. It is much cheaper for him to dig a large hole back of his house and bury his own household rubbish, as it is in no sense of the word fit for a fertil-

izer. The popular belief is, that it is a rich and valuable manure, but ask your farmers what the average house production is worth per ton, and you will find, that, what everybody knows, is not so—in this case. The cities that have filtered their swill through hogs and cattle are praying for relief, and this method may be compared to sea disposal thus: less waste, more nuisance, and as great a failure.

It is a long step from the pig-stye to the third method—reduction. Perhaps one of the largest and best equipped of reductors is the Southampton. This will work at a loss of 7 cents per ton, with cheap labor, great economy, and the utilization of every possible bit of rubbish. The most popular of these machines in America seems to be the Merz.

As far as odor is concerned, the Merz has not had a fair chance, because the cities operating it would insist on storing the garbage in open sheds around the plant itself. Naturally, the neighborhood had the full benefit of the putrefaction. There is no reason why the operation should not be perfectly odorless. But in deriving gold from garbage this process is a dismal failure. It requires a large sum of money to erect a plant. One large enough for New York is estimated at nearly a million and a half of dollars. The grease obtained has so little real value that in some places it does not pay to run the extractors. In Paterson, N. J., after the first Merz plant burned, the system was replaced with the extractors omitted. The St. Paul plant which was burned has never been rebuilt. I am told that the Buffalo works are run at a profit—and yet I find the city paying an annual subsidy of $35,000. I am informed that the St. Louis plant begins to pay, and I find the city paying $1.80 per ton for having the garbage disposed of. I find so many complaints that it is feared that the machinery, costing $400,000, will have to be removed. The plant pays 12 per cent., according to the builders, but the stock is selling at 60. Mr. Frenzel, of ex-Mayor Gilroy's commission, estimates the profit of the utilization companies at $2 per ton—but there is something very strange about this, because I can not find a single municipal plant that pays. The utilization plants of Providence and Cleveland promised much, and have failed utterly.

The cremation furnaces can perform their work satisfactorily, with proper manipulation. The Engle crematory at Des Moines, burns 145 cubic yards and a dead horse in twenty-four hours at an estimated cost of 10 cents a yard. Those who are interested in the Merz process know that ten times, or even twenty times this sum, is not a high estimate for the work necessary to handle a ton through the various manipulations required.

Now it is evident that if we can "Utilize," with as small an expenditure as cremation requires, with a minimum amount of handling, and turn it into a product which has a ready sale on the spot, thus saving the cost of transportation, then we shall go far toward obtaining the hidden wealth. To do this, we must have, first, an odorless and economical furnace—one that has stood the test of long and continued experience preferred. Instead of allowing the heat to escape at a great loss, convert it into steam. Tests in England show an average temperature of 1.646 degrees in the garbage furnace—this is the result of actual measurement with the pyrometer. The result of burning one pound of garbage is sufficient to evaporate one pound of water. The steam produced is utilized to run machinery for various mechanical purposes, such as making card-board, etc. The English people are obliged to be very economical, and the garbage shows a much smaller amount of carbohydrates and fats than ours. Hence, it seems reasonable to take for granted that the production of steam may have a greater percentage to waste burned, in this country than over there. In my search for an odorless furnace I met, among many, with the Rider, which has given satisfactory service to Allegheny and Pittsburg for about eight years. Perhaps it is the simplest and cheapest of all. A committee of investigation from Newport, R. I., had the curiosity to inquire whether the odors came out of the chimney, and one of their number, Mr. James A. Eddy, in his letter just before me states: "I went at once to the top of the stack and tested the matter, but there was no odor, gas, or offensive smell and I returned satisfied that the combustion was complete. We were all satisfied, and recommended the adoption of this furnace to our city."

Then, to my surprise, I found the Duquesne tannery running four acres of machinery with one of these furnaces, burning tan bark, but, as well, offal of various kinds. Their bills were $4,000 a year for coal before putting in the furnace and $100 a year after. As to the ability of garbage to make steam, that has been proved, but I will just add an instance quoted from a letter from Dr. Dunn, ex-President Pittsburg Board of Health. He went to the tannery, found the boiler pressure at eighty pounds; he stopped the fuel and had charged into the furnace three tons of decayed melons, potatoes and fruit, two tons cow manure, ten barrels cesspool matter, and two tons butcher's offal. In all about ten tons bad smelling material. This was entirely consumed in two and one-half hours, with no reduction of power, without odor or smoke, and the gauge still registering eighty pounds. After such a test, let us take for granted, that an odorless, steam-making, garbage furnace is an accomplished fact.

Now, if we can convert our garbage into power, we have something that will bring its price in large cities, everywhere and always. Have the furnaces centrally located to decrease cost of hauling. Steam rents in New York for from $50 to $100 a horse-power per year. Each furnace can readily make from 200 to 250 horse-power—day and night. Thus each one has an earning capacity of $10,000 a year, on a supply of sixty tons of refuse a day.

The cost of labor and fuel is easily covered by 25 cents per ton, or $15 a day, or $5,475 a year, leaving a net earning margin of $4,000 after deducting for repairs and emergencies. Of course, all expenses would be lowered by using cinders for fuel—in practical operation.

I always hesitate in giving facts and figures because they always bring to my mind Josh Billings' keen proverb: "Nothing will lie like figures except facts," or, as one medical man put it, in a city far away: "The garbage disposal here is a political reduction method by which fibs, untruths and plain lies are reduced to statistics."

If we are to have public disposal, I can find nothing better than the plans given before the Academy of Medicine, in my address delivered two days before the report of the Mayor's commission. Inventors have again and again shown to Mr. Harold P. Brown and myself, working plans of steam-making garbage

furnaces, the adoption of any one of which would eliminate scows and propellers, and save the city $1,000 a day in cutting off this single item of expense.

The fuel value of New York garbage is largely in excess of that in European waste. As Dr. Thomas H. Manley once said to me: "Half of Vienna could live out of New York's ash barrels." In Austria, domestic economy is a stringent necessity, hence the constant presence of the vegetable can, the stale bread tin, the grease pot, and the soup kettle in the kitchen. With our population, canned soup is often bought and the hydrocarbons go into the swill pail. Here is a desperate evil, for it is an axiom of political economy that waste makes want. Unfortunately, the law can not step in and force thrift upon our citizens. Will domestic disposal of all garbage help us? It will help the city by doing away with the great expense of gathering and transportation, but, if the disposer is handy, will not our servants and our poor be more apt to put the drippings and grease into it, rather than take the trouble to fry out the fat for cooking purposes? Shall we not be saving the public purse at the expense of many private ones? The best way seems to be to keep the gold out of the garbage, rather than to attempt to get it out after it has been thrown in. And for this reason I should suggest that the public schools for girls give two hours each week to kitchen economics; let them teach only theory out of some good practical common-sense book, and you may be quite sure most of the little scholars will prove missionaries and reformers of the doctrine of thrift in the next generation, and many of them will be able to save 5 cents out of every dollar earned by the head of the house. Now, therefore, let us investigate the waste at its source—the cook. It is absurd for us to tell that domestic to save albuminoids, carbohydrates, and fats, for she could not understand, but we can find out how she manages to waste them, and how they can be utilized.

Albuminoid or nitrogenous: pieces of bread, cold rice, cold corn-meal, cold potato, cold beans, oatmeal, hominy, sour milk, beets, squash, cabbage, turnips, onions, peas, parsley, asparagus, carrots—these are all "no good," and go into the swill pail first of all.

Carbohydrates and fats: meat, poultry and fish in bits, bones, fat, drippings, and pork and sausage fat, mutton tallow, vinegar and fruit syrups, jellies, preserves—all these are thrown away.

Consult a good cook-book and see what this means: bread can be used for puddings, for griddle cakes, for stuffing meat and fish. It can be dried and powdered, serving the same culinary purposes as cracker dust. Rice, cold corn-meal, cold potatoes, cold hominy can be made into griddle cakes, gems and muffins. Sour milk makes doughnuts, gingerbread, pot cheese, and griddle cakes. The green vegetables may be made into hash and into vegetable salads. Meat, poultry, fish, and bones will make soups, gravies, and many made dishes; fat can be used for shortening bread and gingerbread. Pork fat of all kinds is useful for frying purposes. Tallow has many manifest applications. The farmers use it from head to foot—from hair oil to boot grease—not forgetting chapped hands and soap grease. The fruit skimmings and sweetened vinegar will take the place of wine in sauces. Jelly and preserves will make puddings and pies.

I should suggest a large printed card, hung over the range, for Bridget's information, and embodying the use of every scrap which she enjoys putting into the refuse heap, and have her live up to the directions. You will reduce your garbage to such an extent that there will be little trouble in dealing with it, the effort to utilize it will not pay, and the burning of it will not be wasteful. But your citizens will lose the nervous anxious worry, and be able to lay by a "little money for the rainy day." It seems much more reasonable to stop the entrance of gold into garbage than to spend much money to recover a portion of the waste.

Since writing the above, the furnace invented by Mr. A. W. Colwell has been tried in New York. This consists of a steam-making crematory, and although it has been in operation but a short time, yet both from an economical and sanitary standpoint, it promises well. We can not sell a pound of manure in this city, hence the large "paper" earnings given to this product by the "Reduction" people are plainly nonsense. Garbage has fuel value only.

THE INFLUENCE OF ALCOHOL UPON URINARY TOXICITY, AND ITS RELATION TO THE MEDICAL USE OF ALCOHOL.

Read in the Section on State Medicine, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY J. H. KELLOGG, M.D.
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The biologic test for the urine, perfected by Bouchard, is a most important addition to our means of studying disease processes in the body and the effects of various infectious and toxic agents upon the animal organism. Bouchard demonstrated what had previously been suspected, that urea is not the most important toxic agent of urine, although the most abundant excretory product. His researches demonstrated the fact that urea is only very slightly toxic in character, and that it, in fact, serves a very important and useful rôle in the economy by stimulating renal activity, acting thus as a true physiologic diuretic. The experiments of Bouchard and Rogers have shown very clearly that the urine contains more than half a dozen toxic agents, most of which are far more important in character than urea. Urea is, however, a useful measure of these agents under ordinary circumstances, that is, when the urine contains only the normal toxins; but, under unusual morbid conditions produced either artificially for experimental purposes, or naturally as the result of an infection of some sort, the quantitative determination of urea is no longer a reliable guide, in fact, it may give no suggestion in relation to grave morbid processes resulting in the formation of large quantities of toxic substances and a consequent condition of general toxemia. The same is true with reference to the various other modes of examining urine in common use.

The biologic test of the urine does not require a chemic examination of the urine, hence does not depend upon the chemic recognition, by reagents, of minute quantities of chemic substances, the reactions for which may be obscured by the presence of other known or unknown substances, but makes a direct determination, both quantitatively, and, to some extent qualitatively, respecting the toxic character of the urine in both normal and pathologic conditions.

The following is the method: the urine collected for a definite time, and, if necessary, calculated for twenty-four hours is carefully neutralized and then injected at the rate of 1 c.c. per second into the venous system of a rabbit which has previously been carefully weighed; the weight of the patient must also be known. The exact quantity required to cause the death of the rabbit, and the symptoms occasioned as the result of the injection are carefully noted. The following are obtained, directly or indirectly:

1. The amount of urine required to kill a kilogram of rabbit.

2. The number of kilograms of rabbit which might be killed by the total amount of urine produced in twenty-four hours.

3. The amount of rabbit which might be killed by the quantity of toxic substances produced in twenty-four hours by each kilogram of the patient. The latter quantity is termed the urotoxic coefficient, and is represented normally by the fraction .44, that is, the quantity of urine produced in twenty-four hours by each kilogram of normal human being is capable of destroying the life of .44 kilogram of living being, consequently, if these substances were retained within the body by failure of the kidneys to eliminate them, death would result, approximately in about two and a half days. Clinical observation with reference to the effects of complete suppression of the urinary function agree with the results of experimental study.

I have employed the biologic test a very considerable number of times, some hundreds of times in all, and am fully satisfied with regard to its reliability and accuracy. It is, indeed, a most remarkably delicate test of the condition of the system in general, and of the renal function in particular. A few observations which I have made will serve to illustrate the value of these means of investigation. In a case of tuberculosis the toxicity of the urine was found to be double the normal. Among the most prominent symptoms occasioned by the injection, was a very great rise in temperature, the elevation in temperature amounting to over 3 degrees C. In a considerable number of tests made, in which the urine of a patient suffering from typhoid fever was employed, the toxicity of the urine was found to be greatly increased in every instance, and occasioned a marked elevation of temperature. In a case of intermittent fever of malarial origin, the urotoxic coefficient of 2.36 was found during the paroxysm, the coefficient of being .76 before, and .78 after. This observation seems to show that during the paroxysm of malarial fever there is produced by the parasites of this disease a febrile substance to which the febrile action is due. This subject the writer has considered at length elsewhere.

One of the most interesting observations I have made was in a case of idiopathic epilepsy; the urine employed was collected while the patient was just recovering from a succession of epileptic seizures, having been in what is known as the epileptic state, or static epilepticus for nearly thirty-six hours. The urine was found to be extremely toxic, the degree of toxicity being three times the normal. The rabbit died in convulsions which were distinctly epileptiform in character.

The biologic test applied to the urine of pneumonia, erysipelas, scarlet fever, diphtheria, and all other infectious maladies shows a marked increase in the toxicity. When the patient is doing well, that is, when the poison is being eliminated by the kidneys. In pneumonia, for example, the toxicity of the urine may be considerably diminished during the first few days, but when the critical period is passed and favorable symptoms make their appearance the toxicity of the urine is found to be three or four times the normal.

Delicate chemic investigations of the urine which have been made by Gauthier, Brieger, and others, have revealed the presence in the urine of definite organic compounds which possess characteristic toxic properties. Chemic researches, when sufficiently refined and delicate thus agree with the biologic test, but the modes of investigation employed are too troublesome to be ordinarily used, hence the value of the biologic test.

The above mentioned observations, and many others, having fully established my confidence in the biologic test as a reliable mode of investigation, I determined to make an experiment for the purpose of determining the influence of alcohol upon urinary toxicity. The subject of the experiment was a healthy man of 30 years, weighing 66 kilos. For fifty days prior to the experiment he had taken a carefully regulated diet and the urotoxic coefficient had remained very nearly uniform. The urine carefully collected for the first eight hours after the administration of 8 ounces of brandy diluted with water, showed an enormous diminution in the urotoxic coefficient, which was, in fact, scarcely more than half the normal coefficient for the individual in question. The urine collected for the second period of eight hours showed an increase of toxicity, and that for the third period of eight hours showed still further increase of toxicity, the coefficient having nearly returned to its normal standard.

The bearing of the results of this experiment upon the use of alcohol in pneumonia, typhoid fever, erysipelas, cholera and other infectious disorders will be clearly seen. In all the maladies named, and in nearly all other infectious diseases, which includes the greater number of acute maladies, the symptoms which give the patient the greatest inconvenience, and those which have a fatal termination, when such is the result, are directly attributable to the influence of the toxic substances generated within the system of the patient as the result of the presence of the specific microbes to which the disease owes its origin. The activity of the liver in destroying these poisons, and of the kidney in eliminating them, are the physiologic processes which stand between the patient and death. In a very grave case of infectious disease, without this destructive and eliminative activity the accumulation of poison within the system would quickly reach a fatal point. The symptoms of the patient vary for better or worse just in relation to the augmentation or diminution of the quantity of toxic substances within the body.

It is the recognition of this fact which has led to the recent general revival of hydrotherapy in the treatment of acute febrile disorders. Water applied externally stimulates cutaneous elimination, and, employed freely internally by water drinking and the introduction of water in quantities into the colon to be retained for absorption, aids liver and kidney activity. If the patient dies, it is because his liver and kidneys have failed to destroy and eliminate the poisons with sufficient rapidity to prevent their producing fatal mischief among the delicate mechanisms of the body.

In view of these facts, is it not a pertinent question to ask how alcohol can be of service in the treatment of such disorders as pneumonia, typhoid fever, cholera, erysipelas and other infections, since it acts in such a decided and powerful manner in diminishing urinary toxicity,—in other words, in lessening the ability of the kidney to eliminate toxic substances? In infectious diseases of every sort, the body is struggling under the influence of toxic agents, the result of the action of microbes. Alcohol is another toxic agent of precisely the same origin. Like other toxins resulting from like processes of bacterial growth, its influence upon the human organism is unfriendly; it disturbs the vital processes; it disturbs every vital function, and, as we have shown, in a most marked degree diminishes the efficiency of the kidneys in the removal of the toxins which constitute the most active factor in the diseases named, and in others of analogous character. If a patient is struggling under the influence of the pneumococcus, or Eberth's bacillus, Koch's cholera microbe, or the pus-producing germs which give rise to erysipelatous inflammation, his kidneys laboring to undo, so far as possible, the mischief done by the invading parasites, by eliminating the poisons formed by them, what good could possibly be accomplished by the administration of a drug, one of the characteristic effects of which is to diminish renal activity, thereby diminishing also the quantity of poisons eliminated through this channel? Is not such a course in the highest degree calculated to add fuel to the flame? Is it not placing obstacles in the way of the vital forces which are already hampered in their work by the powerfully toxic agents to the influence of which they are subjected?

In his address before the AMERICAN MEDICAL ASSOCIATION at Milwaukee, Dr. Ernest Hart very aptly suggested in relation to the treatment of cholera the inutility of alcohol, basing his suggestion upon the fact that in a case of cholera the system of the patient is combating the specific poison which is the product of the microbe of this disease, and hence is not likely to be aided by the introduction of a poison produced by another microbe, namely, alcohol. This logic seems very sound, and the facts, in relation to the influence of alcohol upon urinary toxicity or renal activity, which is elucidated by our experiment, fully sustain this observation of Dr. Hart.

It is also easy to show the important bearing of the fact to which we have called attention upon the relation of alcohol to chronic disease. Alcohol is doubtless, at the present time, much less frequently prescribed as a remedy in chronic disease than a quarter of a century ago.

In a recent number of the *British Medical Journal*, Dr. Lauer Brunton, the eminent English physiologist and neurologist, in mentioning the fact that death from chloroform anesthesia rarely occurs in India, but is not infrequent in England, attributed the fact to the meat-eating habits of the English people, the natives of India being almost strictly vegetarian in diet, partly from force of circumstances doubtless, but largely also, no doubt as the result of their religious belief, the larger proportion of the population being more or less strict adherents to the doctrines of Buddha which strictly prohibit the use of flesh foods.

The theory advanced by Dr. Lauder Brunton in relation to death from chloroform poisoning, is that the patient does not die directly from the influence of chloroform upon the nerve centers, but that death is due to the influence of chloroform upon the kidneys, whereby the elimination of the ptomaines and leucomaines naturally produced within the body ceases, their destruction by the liver also ceasing, so that the system is suddenly overwhelmed by a great quantity of poison and succumbs to its influence, its power of resistance being lessened by the inhalation of the chloroform.

The affinity between alcohol and chloroform is very great. Both are anesthetic. Both chloroform and alcohol are simply different compounds of the same radical, and the results of our experiment certainly suggest the same thought as that expressed by Dr. Brunton. How absurd, then, is the administration of alcohol in conditions in which the highest degree of kidney activity is required for the elimination of toxic agents.

Another thought is suggested in this same connection, namely, the absurdity of injecting alcohol in a case of threatened death in chloroform anesthesia. Notwithstanding the extensive use of alcohol for this purpose during many years, can any person testify that he has seen a single life saved by it? The evident danger of establishing the alcohol habit by such a use of the drug doubtless influences most intelligent physicians sufficiently to lead them to consider it better for the patient to forego any possible benefit which he might receive from the use of alcohol, rather than become a confirmed inebriate. Nevertheless there are still many practitioners who recommend to certain classes of patients the habitual use of beer or wine or some other of the so-called light liquors with the idea that by their use nutrition may be improved, and appetite, digestion, or assimilation increased, or some good be accomplished in some way which no one has attempted to explain.

In a certain proportion of these chronic cases there is a tendency to tissue degeneration. Modern investigations have given good ground for the belief that these degenerations are the result of the influence of ptomaines, leucomaines, and other poisons produced within the body upon the tissues. It is well known that many of these toxic agents, even in very small quantity give rise to degenerations of the kidney. It is this fact which explains the occurrence of nephritis in connection with diphtheria, scarlet fever, and other infectious maladies. Dana has called attention to the probable rôle played by ptomaines produced in the alimentary canal in the development of organic disease of the central nervous system.

It is thus apparent that the integrity of the renal functions is a matter of as great importance in chronic as in acute disease, hence any agent which diminishes the efficiency of these organs in ridding the system of poisons, either those normally and regularly produced, or those of an accidental or unusual character must be pernicious and dangerous in use.

In conclusion, I desire to say that this paper is not claimed to be an exhaustive study of the subject presented, but simply a preliminary report of a work which I have begun, and which I hope to continue in the same line, with the expectation of securing still other interesting and valuable results.

A Retort a la Puffendorf.—Swell of the Period: "Oh! doctor, I have sent for you, certainly; still I must confess I have not the slightest faith in modern medical science."

Doctor: "Oh! that doesn't matter in the least. You see, a mule has no faith in the veterinary surgeon, and yet he cures him all the same."—*Tagliche Rundschau.*

THE TREATMENT OF TYPHOID FEVER WITHOUT ALCOHOL.

Read in the Section on State Medicine, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

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The purpose of the present paper is to give, briefly, an outline of the method of treatment of typhoid fever as used by the writer in a considerable number of cases.

A consideration of the pathology of this disease does not properly come under this head, but we wish simply to call attention to the well-known fact that typhoid fever is a germ disease. The germ which causes this fever has been generally supposed to be the bacillus of Eberth. More recent bacteriologic studies rather indicate that the bacillus coli may also cause the disease. These germs are usually carried into the body in food or drink, and lodging in the small intestines begin to grow and multiply, and by their life produce poisonous ptomaines which are absorbed and carried by the circulation to all the organs and tissues of the body. It is these ptomaines thus carried to all parts of the body that are largely the immediate cause of the pyrexia and attending symptoms. The organisms which produce these poisons for the most part remain in the intestines, although they have also been found in the spleen.

The indications for treatment are:

1. To remove or destroy the cause (to eliminate the germs and ptomaines from the body).

2. To sustain the vital and resisting powers of the patient.

If the patient is seen early in the disease, it has been my practice to immediately put him to bed and give a free dose of magnesium sulphate. This is preferably given in the morning or forenoon, and may be repeated once or twice on successive days. Beside this the patient should have a large enema of water at a temperature of from 75 to 80 degrees Fah. and this may be repeated daily, or even oftener, for some time, if necessary, to keep the bowels empty of poisonous substances.

The salines and enemas thus used, carry out bodily a large number of germs and ptomaines that are present in the intestines; and further, the salines, by producing an increased secretion of the mucous membrane of the intestines, tend to disentangle and set free many of the germs that have found a lodging place in the walls of the intestines.

For the elimination of the ptomaines which have been absorbed into circulation and carried to the tissues, nothing is better than the internal use of water. From three to five pints should be drunk during every twenty-four hours. It should be taken in small quantities, six to eight ounces every hour or two during waking hours, except when food is taken. We will refer to this point more in detail later.

A consideration of the general care of the patient properly comes under the second head of the indications for treatment as given above. The patient should be put to bed in a large, light, well-ventilated room. At least two sides of the room should communicate directly by windows with out-of-doors, in order that the room may be properly ventilated, All unnecessary articles of furniture, such as carpets, couches, upholstered chairs, pictures, etc., should be removed.

The room should be thoroughly cleaned before the patient is put in it. There should be two beds in the room for the use of the patient. These should be preferably narrow, and so placed in the room that there is a free approach to both sides of the bed, for the convenience of the nurse in giving treatment. Iron bedsteads are preferable to wooden. The bedding should be firm, yet soft and smoothly drawn. There should be just sufficient covering to protect the body. The patient should be changed from one bed to the other daily. This may be done by placing the two beds side by side and carefully moving the patient from one to the other. The sheets on the bed from which the patient has been taken should be washed and disinfected at each change of the beds, and all other bedding should be thoroughly aired and exposed to the sunlight.

The patient should have the care of a thoroughly educated, careful and competent nurse; one who understands perfectly the various methods of using water in the treatment of fevers.

There is no other single remedy that I consider so valuable in the treatment of fever as the internal use of water. As above stated, the patient should drink six or eight ounces every hour during the waking hours, except for about two hours after food is taken. The water should be thoroughly sterilized, and as a rule may be taken either cool or hot. Ice water is objectionable. Hot water is often preferable. This is a simple remedy, but nevertheless is efficacious. It should be given to the patient whether he calls for it or not, and should be considered an important part of his treatment. When water is taken into the stomach and absorbed into the circulation, it throws into solution the ptomaines which have been absorbed from the intestines and are present in the circulation and tissues, and thereby puts them in a favorable condition for elimination. It increases the activity of the kidneys, and thus hastens and increases elimination of the poisons in the system.

In the early stage of the fever, when the pulse is full and the action of the heart increased, it is best to give the patient cool water. Later in the disease, when the action of the heart is weak and the patient feeble, it is best to give the water hot.

Winternitz, many years ago, demonstrated that hot water taken into the stomach acted as a cardiac stimulant, and the increased heart's action is immediate, or at least before the water has time to absorb, which indicates that the hot water in the stomach acts reflexly as a cardiac stimulant. The water after absorption also increases the circulation by filling the blood vessels and increasing arterial pressure. The writer has frequently noticed a decided increase in the fullness and rapidity of the pulse after a patient has drank a glassful of hot water.

The external use of water also forms an important part of the treatment. The patient should be sponged off with tepid water every hour or two when the temperature is 103 degrees or above. When the temperature is less than this, it is not necessary to sponge the body so frequently. Sometimes a hot sponge bath is more efficacious in reducing the temperature than the tepid or cool bath. The sponge bath reduces the temperature, relieves many of the distressing nervous symptoms, is refreshing to the patient, and promotes sleep. The temperature of the body may also be reduced by the use of cool compresses placed over the abdomen and changed frequently.

The matter of diet is an important factor in the treatment of typhoid fever. The diet should be aseptic, easily digested, and should contain the necessary food elements. Probably no one article of diet meets all these requirements as well as sterilized milk. The patient should take from two to three pints daily. The milk is best taken four times during the day at intervals of four hours, taking eight to ten ounces at a time. Should the patient become tired of the milk, gluten gruel may be substituted at times for the milk. A new preparation known as malted gluten, manufactured by the Sanitarium Health Food Company, Battle Creek, Mich., would probably be preferable to gluten, as it is more soluble, and consequently more readily assimilated.

The diarrhea and bowel symptoms, when present, may be relieved by the application of hot fomentations to the abdomen, warm or hot enemas, and 20 grains of subnitrate of bismuth given every four hours.

The patient should be kept as quiet as possible, and should be turned in bed at intervals, to prevent hypostatic congestion and the formation of bed-sores. The bony prominences which are apt to become eroded should be sponged frequently with a solution of tannic acid in equal parts of alcohol and water; a drachm of the tannic acid to a pint of alcohol and water is about the proper strength to use.

By the methods outlined above, that is, by the free use of water internally and externally, by keeping the intestines thoroughly emptied of poisonous material, by the free and frequent use of enemas, by proper feeding and careful attention of a good nurse to the patient and his surroundings, the duration of the fever may be shortened, and the severity of the disease lessened; heart failure and other complications will seldom occur, and the patient will in nearly every instance make a good recovery.

The best method to pursue to prevent heart failure is to keep the poisons which are generated in the bowels and absorbed into the body, and which are the direct cause of the heart failure, eliminated from the body. Should the heart become weak, it may be effectually stimulated by giving hot water to drink, applying heat to the heart in the form of a fomentation, and the application of fomentations to the upper spine.

In the treatment of a large number of cases of typhoid fever, extending over several years' practice, the writer has never made use of alcohol internally to support the action of the heart or for any other purpose.

The number of cases of death from typhoid fever coming under the writer's observation, where the method of treatment pursued has been similar to that indicated above, have been very few, and a much smaller per cent. than in practice where alcohol has been used as a "cardiac stimulant." The writer believes that the use of alcohol in the treatment of typhoid fever is not only useless, but absolutely harmful.

More Oysters Called for in Chicago.—The poet, or song-writer, on the staff of the Chicago *Tribune* is manifestly and urgently observant of the fact that oysters may be eaten in September; he says:

"The oyster now is on our shore, Maryland, my Maryland. Li-tum-ti-tum-ti as before, Maryland, my Maryland. Ri-tooral-looral o'er and o'er, tra-la-la-la abundant store, hi-umpty bumpty send some more, Maryland, my Maryland."

REPORT OF THE TREATMENT OF SIX GRAVE CASES OF TYPHOID FEVER WITHOUT ALCOHOL.

Read in the Section on State Medicine at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

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The use of any remedy empirically declines always in proportion to increased knowledge of facts and the approach to exactness in medical science in all its branches. When the treatment of disease consisted almost entirely of a medication of symptoms and no fixed rules or indications regulated the giving of drugs, many remedies were used because of precedent and without any other virtue to recommend them for the cure of disease. At the present, when rational ideas about the causes, course, and all other phenomena of disease are found, collected and classified from actual knowledge of these subjects, and the progressive medical mind is not satisfied with the therapeutics of the past, many remedies and methods of treatment, some of them very popular, have been superseded by other and more rational methods of dealing with disease. Preventive medicine has come to the front in many departments of healing, notably in surgery, obstetrics, and the stamping out of many contagious diseases, until we know just what result may be expected from a given, proven line of treatment. No surgeon of to-day would be satisfied with what made glad the hearts of the surgeons of thirty or less years ago. When the house surgeons reported a wound discharging laudable pus freely, it was taken as an evidence that all was well with the patient, and very satisfactory to physicians and nurses. To-day a ward full of laudable pus-discharging wounds would be a signal for sanitary investigation, and an inquiry as to who had sinned, the physician or nurses. What has been the violation of the law of surgical cleanliness in the matter of the preparation for the operation and the dressing of the wound? What, or who was unclean? Patient, attendants, instruments, air, or operating room or ward? And the signal also for a thorough cleansing and disinfecting of everything, and increased care and cleanliness to prevent further extension of the wound infection is indicated.

About a quarter of a century ago the visiting obstetrician of the obstetrical ward of a large city hospital directed the house physician in a case of puerperal septicema to give hypodermic injections of morphin until the patient was narcotized within an inch of her life, which inch slipped away within forty-eight hours, notwithstanding the house physician's faithfulness for the uterus and adnexa were exhibited to the students within that time. The uterine mucous necrosed in spots, shreds of decaying membranes and clots of blood all told the story of a toxic center from which floods of ptomaines and other morbid elements passed by way of the absorbents and blood currents to evey part of the body, completely stopping all assimilation and arresting all functional activity. To-day a similar case would be treated by curetting, flushing and disinfecting, like any other abscess, getting rid of the morbid matter and microbes, and with them the heart failure and other dangerous symptoms for which the heroic doses of morphin or alcohol were given.

Now, latest investigations of the bacteriology of typhoid fever indicate that during the first ten or

fifteen days, typhoid bacilli are found in blood and excretions, later streptococci predominate, causing the pyrexia of the second, third and fourth weeks, the critical period usually in a typhoid fever case, the time when some authors consider alcohol the principal resource of the physician for impending heart failure. (See Osler's "Practice of Medicine," page 38.)

Now to do away with the necessity for the use of this very objectionable drug we have to locate the toxic centers, as in the case of the septic wound and uterus, and devise some safe method of cleansing and disinfecting it, to be as successful as a physician as the surgeon of to-day, in preventing this secondary infection, or of lessening the amount and formation of toxins to that extent that the bodily vital energies will not be overpowered in the conflict with them. The chief toxic center is evidently the intestinal tract, especially the termination of the ileum. The ulceration, necrosis, perforation and hemorrhage, are most frequently found in the last twelve inches of the small intestines, and may extend into the large intestines. The ulcerated surface and open vessels increase the facility for the poison to find an easy entrance into the structures of the body. The microbes, blood clots, necrosed tissue, and pus furnishing abundant supply of toxic matter, which, saturating the system, overpower and stop the activity of the functions of all the organs of the body, causing degeneration of tissues, and death is said to take place from heart, lung, or brain failure, when the failure involves every other organ as well.

Regarding the intestinal tract as any other abscess at this time the physician should seek for methods of treatment or remedies which will remove the morbid matter and destroy, or at least inhibit their action, thus decrease the fever and stimulate the circulation. Secondary toxic centers often develop in the course of this disease, notably in the glands, lungs and depending organs. The hypostatic congestion resulting from lying in one position causing stasis of blood, death and necrosis of tissues, both of the external and internal organs. All vessels connected with the dying tissues carrying toxins to other parts of the body, fermenting food in the stomach and bowels, suppurating glands, phlebitis of the femoral veins, are all examples of this secondary infection, and are accountable for the heart failure and collapses so often fatal during the second, third and fourth weeks of typhoid fever. The six cases I now report will be illustrations of the good effect of rational measures to prevent and meet these complications. It is not said to be the best that may be discovered in the near future, but better than the mere empirical administration of any narcotic or other drug, the action and therapeutic value of which is so much disputed as alcohol at the present time. It also indicates a line of clinical experimentation in the line of intestinal antisepsis, and cleansing and elimination of the alimentary tract, also means to avoid and overcome the blood stasis and death of tissue in the weak dependent organs of the body, liable to stagnation from obstruction or position. The old idea that in peristaltic action lay the great danger of increase of the hemorrhage and perforation of the bowels is giving way to the more rational view that gaseous distension and septic absorption are what bring about fatal results from these complications, and that the moderate peristalsis of the intestinal walls lessens these dangers by closing the gaping ends of the injured vessels and expelling the septic matter and foul gases. To meet these indications I have found lavage of the bowels, even during hemorrhage, with water of 105 to 110 degrees, or even hotter, given in moderate quantity of from one pint to three, to give great relief by freeing the large intestines of blood clots, fecal matter, and other morbid matter, and also increasing peristaltic action in the small intestines, favoring the expulsion of gas, the heat stimulating the circulation in the peripheral vessels of the intestines, and overcoming the tendency to blood stasis.

Ice bags alternated with fomentations were used over the abdomen externally, and heat, or hot and cold to spine. The extremities were kept warm. From 10 to 30 minims of turpentine in an ounce of gum acacia or starch water increased the efficiency of the enemas and aided in expelling the gas and checking hemorrhage.

The tendency to hypostatic congestion and bed-sores was prevented by frequent change of position and the use of hot and cold to spine, by fomentations and compresses to spine, or better still, hot fine spraying, or alternate hot and cold spray. In one grave case, spraying was kept up for about twelve hours with only short intermissions. The heart was stimulated by heat over it, whenever depression and collapse threatened. From a series of 120 cases of continued fever lasting three weeks and over, not influenced in any way by quinin, the six cases reported below were selected from fifteen very grave cases. These six reached the extremely critical condition.

Case 1.—A. C., age 26; nurse; supposed to have contracted the disease from a 2-year-old child she was nursing. Temperature taken when she went to bed, Dec. 12, 1887, 103 degrees, 6 A. M. Had been feeling indisposed for about a week, with slight and increasing evening temperature and some chilly sensations, but no well-defined chill. From that date until December 24, temperature ranged very steadily between 104 degrees P. M. and 103 degrees A. M., with two or three exceptions, where it rose evenings to 105 degrees, and mornings fell for a short time to 101.5 degrees F. The 20th and 21st there was moderate hemorrhage from bowels, checked by ice to abdomen and heat to spine, and astringent enemas of moderate temperature were given. December 22, one-half pint of blood passed, also at 9 A. M. and 4 P. M.; 7 P. M. to 10 P. M. about a pint of blood clots passed. Patient now began to have marked symptoms of heart failure and indication of hypostatic congestion and bed-sores. Enemas were now given frequently of a higher temperature, and the hot applications made to spine and over abdomen. The gaseous distension was finally overcome, and with the removal of the distension and improved heart action and circulation in all parts of the body, the patient's condition began to improve, although she continued to be indifferent to her surroundings and passed all discharges in bed until December 31, when temperature was normal for the first time, and never reached 101 degrees. A very slow but steady convalescence followed, until Jan. 18, 1888, when unwise friends gave her a full meal of meat, rice pudding, and other hearty food for dinner, causing a severe pain in bowels and stomach, vomiting and purging, and an attack of acute gastritis ensued. Temperature rose from 98.2 degrees A. M. to 103 degrees 6 P. M. the same day. It ranged between 100 degrees morning and 103 degrees until January 27; at that date it reached the normal temperature morning, and evening kept below 102 degrees. February 1 patient was discharged from treatment. For several days patient was nourished by nutrient enemata during relapse. Never reached the danger line, as during the ulcerative stage of the fever.

Case 2.—C. F., young man, age 24, also nurse, contracted fever from a patient he was nursing. Had been feeling unwell for about two weeks, but did not wish to give up, as he wanted to attend college during the winter. Had had a rise of temperature ten days when he took to bed with fever 104 degrees. Had hoped the fever was malaria, and tried to

keep it off with antiperiods. Soon after going to bed the ocher-colored discharges and bloating tympanitis and muttering delirium of typhoid were well marked. Temperature followed the regular typhoid curve of 104 degrees P. M. and 103 degrees A. M. Middle of second week several severe hemorrhages occurred. Patient's condition became critical, but after free lavage of the bowels and the removal of a great amount of blood clots, sloughs, and other morbid matter his condition began to improve. Unfortunately a new nurse took charge of the case at this time, and fearful of producing another hemorrhage, allowed patient to remain on back for about twelve hours without change of position, when the hardening of the tissues over the hip bones and shoulder blades showed that there were extensive areas of dead tissue, and the patient's condition once more became critical from absorption and hypostatic congestion of lungs, spine and all depending organs. It was at this time the twelve-hour-long spray was given. Respiration became very rapid at this time, also pulse rapid and feeble. Under the spray they improved, but the respiration continued 40 and above for about a week. Extensive sloughing of the indurated tissues took place, but under the continued stimulating effect of the spray and antiseptic treatment, healthy granulations soon began to form and the patient recovered, the fever lasting from Dec. 18, 1887, the day he took to bed, until March 1, 1888. When he finally recovered there was extensive atrophy of voluntary muscles, involving the adductors of thumbs and of thighs especially. These muscles were never completely restored, either in size or function.

Case 3.—Miss E. P., college student, age 20, came into the boarding hall of college at opening of college year, middle of September, 1888. Felt tired and unable to begin her studies when the college course opened, but thought by resting a few days would be better. At the end of a week the college preceptress became anxious about her and brought her to a physician, who had her temperature taken and found it 103 degrees. The most distressing symptom at this time was an intense continuous headache, frontal and occipital, which was relieved neither by bromid, antifebrin, antipyrin, or hot and cold applications. It finally abated somewhat under the use of ice and galvanism. Opiates seemed to aggravate. The temperature course was about the same as the other two cases reported. Tympanitis, diarrhea, rash, and sloughing of Peyer's patches ensued. The hemorrhage was slight, but gaseous distension was very marked and required frequent enemata and mild salines with salol bismuth, and other eliminative and antiseptic measures to keep the patient at all comfortable. There was great nervous prostration and a tendency to hypostatic congestion, causing labored breathing and a quick, feeble pulse. The applications of hot and cold to spine were often the only thing which procured her any rest. After these treatments she would sleep for from one to four hours. There was always great tenderness of scalp and tendency of the head to draw backward. After a very critical week, the fourth of her illness since taking to bed, all the symptoms seemed to improve, and for about ten days pulse became strong, about 85 to 90; temperature near the normal line; appetite improved, and discharges from bowels became more normal; only head symptoms remained, and she had delusions of having threads or splinters in her throat. One morning in the middle of the sixth week of her illness she asked her nurse for the bed pan. The nurse went to the closet to get it, when the patient screamed out: "O, nurse, come quick, quick!" When the nurse got to her she was unconscious, face flushed and livid, complete paralysis of all the muscles of the body, and every evidence of rupture of blood vessels in the brain, and the formation of an extensive clot. She died of brain failure and compression in twenty-eight hours, being the only fatal case of the series.

Case 4.—Miss C. D., age 22, dressmaker, called at my office Oct. 12, 1888, about noon. Complained of feeling badly for about ten days. Had chilly feeling in the morning; felt hot and feverish at night; no sweating; nose bled freely. Took temperature, found it 104 degrees F. Had not sought any medical advice before. She was put to bed and treatment to reduce the fever began at once. Her case pursued a course very similar to No. 1. The free hemorrhage from bowels with evidence of secondary infection and heart failure, and to meet these indications treatment was the same, save there was no relapse. Was discharged with normal temperature Dec. 9, 1888.

Case 5.—A. S., a young girl, age 12. Very frail, orphan, parents both died young, but cause not known. Patient had complained of feeling unwell for a number of days. On Oct. 21, 1894, physician first called to see her. Temperature found to be 104 degrees. As she was reported to have had a chill early in the morning of that day and also two days before to have had chill, fever and sweating, she was given a cathartic, warm bath and 12 grains of quinin in divided doses of three grains each. This treatment was continued three days without any influence on the fever whatever, which followed the regular course of evening rise to 104 degrees and morning decline to 102.5 degrees, though sometimes it rose to 106 degrees for a short time. Was very nervous. October 26, had a moderate hemorrhage from bowels; suffered greatly from distension and gas. Hemorrhages repeated the 27th; gas still very troublesome; abdomen hard; grasped throat and struggled for breath; heart's action bad, pulse quick, weak, irregular. Turpentine was now added to the enemas, 15 minims to a pint of water. This relieved the bowels of the gas, and a large amount of blood clots, fecal matter and sloughs, when patient became much more quiet. There was at this time the formation of small bed-sores, but under hot and cold sprays they soon healed. Heart when weak was stimulated by heat and electricity. The other complications were purulent otitis media of left ear, on eighteenth day with exacerbation of temperature from 99 to 106 degrees in a few hours, with free discharge of pus from ear, and disinfecting; recovery from this was complete. But the fever was prolonged, a series of boils keeping up a moderate rise of 100 to 101 degrees until Dec. 10, 1894, when patient was discharged with normal temperature, and improving rapidly.

Case 6.—Miss E. R., age 41, school teacher. Seen first Oct. 16, 1894. Seemed in a dazed condition mentally. Had been out walking, started at 9 A. M. and became confused. Remembered going into a colored church; did not remember coming out. When she came to consciousness found herself in the house of a friend. This lady stated that at 1 P. M. she came into her house, looked and acted strangely, not seeming to recognize any one, but asked if she might lie down on a couch and rest. Fell asleep and did not waken until 3 P. M., when she seemed more rational, but was surprised to find herself in her present surroundings, and as to how she got there. Returned to her boarding place looking so ill that a physician was called. It was then learned from a friend that she had been having diarrhea for two weeks, with fever every evening. Evidently a case of walking typhoid fever. The fever in this case was never high, seldom above 103 degrees F., ranged from that to 101 degrees on a few occasions. The principal feature was the disturbance of the sensation. Soon after taking to bed, passed discharges from bowels and bladder involuntarily; was not unconscious, but had many delusions, one that continued after she first suffered from it a number of days, the result of a complication. She imagined she was in bed with a corpse which always lay on her right side. This began October 29, and nurse at that time in report describes eyes as glassy and patient very delirious. A thorough physical examination of right side revealed a tumor under lower border of short ribs about the size of an orange. This continued to increase in size and to grow downward. Whole right side became edematous, and there was every evidence of a deep abscess, though exact location could not be made out. Patient was now very critical, and to complicate matters hemorrhage from the bowels, free, but not in quantities to be dangerous of itself. The usual gaseous distension and sloughing of Peyer's patches, and a complete inability of the stomach to retain food or even water. These complications were treated by lavage of bowels with the turpentine enemata. Lavage of the stomach was also given, resulting in the removal of a great amount of dark green matter. Patient could then retain a small amount of malted milk, the first nourishment by stomach for three days. But her case was now very critical, and the propriety of an operation was considered. The urine had been examined from time to time with nothing special but changes due to tissue waste from the fever. Now it contained pus, albumin, and blood corpuscles in great amount. The pus found, described in urinary reports, as in balls and bunches, and by the nurse a sediment, stated to be a quarter of an inch thick on bottom of bed pan; evidently the abscess had opened either into a ureter or the bladder. This relieved the profound nervous depression which seemed to threaten the patient's life. Respiration during the rapid filling of abscess became slow and labored, often not more than eight to ten a minute. Pulse also was slow and weak; in fact, never was 90 all through the fever which was peculiar to this case, as in all the other cases pulse was 120 to 140 and 160 during critical periods, but in this case at critical stage it went down to 65 and 70, very compressible, and almost imperceptible, with free discharge from abscess, which continued in the

amount of two to four ounces a day, as measured in the bottom of a glass jar, from Nov. 5 until Nov. 24, 1894, when it began to be less in amount, soon became intermittent and finally ceased altogether after December 3. Convalescence was slow, and patient has not fully recovered yet, April 30, 1895, but has gained her usual weight, 140 pounds. There seems to be no evidence of any return of abscess.

This patient was stimulated during stage of depression, as the others, by endeavoring to keep up the heart's action and stimulate the action of the peripheral vessels by applications of both heat and cold alternating, a hot fomentation of ten minutes followed by the short application of an ice bag, or two douche pails, one full of water 120 degrees and the other 32 to 60 degrees used alternately for a minute or two each. Sometimes a continuous hot spray was most soothing, sometimes one of 80 degrees. At the same time every effort was made to discover and cleanse, if possible, the toxic centers. Careful dieting and experiments with fluid foods, often malted or peptonized and the use of cold water treatment to reduce temperature when high, and other remedial measures in common use were applied, save narcotics and alcoholic stimulants. Knowing fully that there is much yet to learn in medicine, and knowing also that but few men, even of reputation in the profession, have faith for that future when the prevention and treatment of disease by the physician shall bring as certain results as the surgeon now expects, I will close, trusting that I have at least indicated the direction that investigations and experiments should be made if we can ever expect to successfully do away with the use of alcohol in the treatment of disease—do away with the need of this, and other harmful drugs, by substituting more rational and successful methods of treatment.

SHOULD ALCOHOL BE USED IN THE TREATMENT OF DISEASE?

Read in the Section on State Medicine, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY H. D. DIDAMA, M.D.
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[ABSTRACT.]

After showing that: 1, alcohol is not a food; 2, does not promote digestion; 3, does cause gastric disturbances; 4, alcohol does not increase muscular strength nor promote physical or mental endurance, Dr. Didama continued:

Observation in by-gone days and accurate recent experiments seem to establish these statements beyond successful contradiction.

It is true that, from the time when the patriarch Noah indulged in the fermented juice of grapes which grew in his own vineyard, down to the latest newspaper advertisement, tradition has claimed that wine—alcoholic wine—not only makes glad the heart of man, but gives strength to the weary and heavy-laden, endurance to the sons of toil, consolation and joy to the broken-hearted, and brilliancy to the sluggish intellect. But the testimony of army officers, of insurance companies, railroad corporations, Arctic explorers, and even football and other fighters, is practically unanimous that total abstainers bear extremes of heat and cold, sharp conflicts, long marches, exposures to storms and malaria and infection better, and recover from fatigue and illness more speedily and thoroughly than those do who bounteously or sparingly partake of the flowing bowl. The same testimony confirms your own observation, that the likelihood of recovery from serious diseases is much diminished by addiction to the use of alcoholic beverages.

The answer of the apologists and advocates is this: Conceding that alcohol is neither directly nor indirectly a food; that it does not promote digestion nor fortify the system against the pestilence that walketh in darkness, nor against the destruction that wasteth at noonday; that its habitual use impairs not only the resisting but the recuperative power of the system; and admitting more than this, even the utmost that is charged against the drinking habit by the advocates of temperance and is well known by the medical profession, that alcohol is the prolific parent of pauperism and wretchedness, of vice and crime and disease, and that the taint of all these may be and often is transmitted to the third and fourth generation; are not the prevalent opinions true, founded on the practice of observing medical men, that the results of modern, accurate, scientific experiments prove beyond controversy that, in the treatment of disease, alcohol is not only useful but so necessary that its judicious employment more than counterbalances all the evils conceded or asserted to be outflowing from or generated by the moderate, and even the immoderate drink habit?

The prevailing opinion of the great majority of wise and otherwise physicians—an opinion founded in part on personal observation and perhaps in greater part on the oral or printed dicta of other physicians—is that alcohol is a stimulant, that it gives strength to a flagging heart, that its use is eminently proper in pneumonia and typhoid fever, when the pulse is weak, and that, in these and all other diseases, the amount administered should constantly increase as the pulse grows weaker; and also that in diphtheria heroic doses are not only justifiable but almost omnipotent in rescuing the patient from the jaws of death.

Years ago a celebrated Brooklyn physician advocated the free use of brandy in this dread disease. This practice—modified in some instances by substituting whisky or wine for brandy—has been pursued extensively throughout this country and foreign lands. An eminent doctor, of large and varied experience in a children's hospital in New York, heartily indorses the practice, and asserts that large doses of alcohol have little or no intoxicating effect on diphtheritic infants. In one of the latest books on children's diseases, a writer declares that the reason why whisky so often fails in the treatment of diphtheria is because it is not given in larger quantities.

Recent and carefully conducted experiments made by competent scientists of world-wide reputation seem to demonstrate that alcohol should be classified with ether and chloroform as an anesthetic, rather than a stimulant. Among these scientists may be mentioned Martin, Ringer, Davis, Sainsbury, Richardson, Reichert, one of whom declares that "alcohol diminishes the sensibility of vasomotor and cardiac nerves as certainly as two and two make four."

As you all probably know, Dr. H. C. Wood asserts, as a result of repeated experiments, that the injections of alcohol in advanced chloroform anesthesia failed in every instance to increase the size or strength of the pulse, and that on several occasions they aided materially in effecting its extinguishment. His em-

phatic advice is: "In accidents during anesthesia avoid the use of all drugs except strychnin, digitalis and ammonia . . . and remember that some, perhaps many, of the deaths which have been set down as due to chloroform and ether, have been produced by the alcohol which has been given for the relief of the patient."

Dr. Frank Payne, Vice-President of the London Pathologic Society, affirms that alcohol is a functional and tissue poison, and that there are no proper or necessary uses of it as a medicine.

Testimony of this sort, the result of experiment and clinical experience, is rapidly accumulating. My limited time will permit me to quote only the matured opinion of Prof. Nathan S. Davis, whose high eminence as a scientist, a lecturer in the Chicago Medical College, an author of numerous medical works, an upright, level-headed, successful and beloved physician, is known and gladly acknowledged by the profession throughout this country and in Europe. Jan. 9, 1895, was his seventy-eighth birthday anniversary. After an entire disuse of alcohol personally and in practice for forty years, and after a long series of experiments, he unhesitatingly declares that alcohol is an anesthetic instead of a stimulant; that as a result of this property it makes the one who uses it feel warmer when he is cold and cooler when he is warm without altering his temperature; that it makes him less sensitive to pain; that in collapse and shock and failing pulse it does not afford relief; that when given with strychnin and digitalis, the stimulating effect is always from these latter articles and is diminished by the alcoholic association; and that wine and beer are diluted poisons, never necessary, never advisable.

Some of the members of the ASSOCIATION have enjoyed during the past year the pleasure of inducing a considerable number of confiding and grateful patients to abstain totally from the use of alcohol as a beverage, and have themselves totally abstained from administering it as a medicine. I think it safe to affirm that the practice has been satisfactory to all the parties concerned.

In the treatment of diphtheria, it has been the custom of not a few physicians, to administer Rhine or Moselle wine in decided preference to brandy or whisky. The comparatively beneficial effects noted must be attributed to the considerable amount of vegetable acid in the wine and not to the small portion of alcohol. There is reason to hope that unfermented wine, which contains all the desirable qualities of the grape with none of its harmful properties, will supersede the intoxicating variety.

The free use of alcohol in the treatment of diphtheria, throughout Europe and in some American cities has been almost universal. The mortality, according to reported statistics, has been appalling. The deaths in the metropolis at home have been 47 per cent., while in Paris, Berlin, and other cities abroad, they have reached the enormous number of more than 60, in 100 cases.

If the antitoxin treatment, which is under hopeful but still somewhat unsettled consideration, shall be proved to possess all the merits which it discoverers and friends claim, there will be no excuse for continuing the employment of alcohol in the treatment of diphtheria.

Curiously enough, in the last report from abroad which has just been furnished by Dr. Rabot of Lyons, the success of antitoxin in curing and preventing the dreadful disease is considered by the Doctor as specially "brilliant," the mortality in forty-seven cases being but 34 per cent., while the mortality in 1893 was 50 per cent. And the reporter significantly and jubilantly adds: "No alcohol was given."

It is just possible that some incredulous caviler will suggest that the more favorable outcome—bad enough as it still is—was because the customary alcohol was not used; and he may even insinuate that the result might have been equally good if the antitoxin also had been omitted.

PERITONEAL SUPPORTS—(LIGAMENTUM PERITONEI).

BY BYRON ROBINSON.
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(*Continued from page 456.*)

The mesocolon dextra et sinistra as peritoneal supports are of much importance to surgeons. The right and left colon have been declared to exist and not to exist by various writers. The following remarks I assume to make after the examination of about two hundred cadavers, the last one hundred for the special purpose of tabulating mathematically the existence and length of the right and left mesocolon. The Scotch anatomist, Symington, declares he never saw a descending mesocolon. Treves examined one hundred cadavers and asserts that there is a descending mesocolon in 36 per cent. of subjects and an ascending mesocolon in 25 per cent. of subjects. Toldt claims one descending colon in twenty subjects. Gray declares that an ascending mesocolon exists "sometimes" and a descending mesocolon more frequently. Lesshaft claims that mesocolon descendens exist on an average once in every six subjects and that the mesocolons increase with age, *i. e.*, as the viscera prolapse the mesocolons become more apparent. Abey in his excellent "Anatomie" is inclined to deny the existence of a mesentery for the vertical colons. In the seventeenth German edition of that classical work of Hyrtl, one can read on page 715: "*Man kann insofern nur unrichtig von einem mesocolon ascendens und descendens uud einem mesorectum sprechen.*" (One can only incorrectly speak of a mesocolon ascendens and descendens and a mesorectum.) One of the greatest of anatomists, Henle, ascribes no mesentery to the vertical colons, asserting them to be fixed to the posterior abdominal wall by connective tissue, immovable. Quain's ninth edition states: "The investment may be complete with a resulting right mesocolon," and "the membrane (peritoneum) invests (the left colon) much in the same manner as the right." The variation of opinion in regard to the existence of the mesentery to the vertical colon is due to what one understands by a mesocolon: 1, it depends how much dragging is performed on the bowel; 2, it depends on the distended or contracted condition of the bowel; 3, it depends on how close the blades of the mesocolon must be to be named mesocolon. After the careful examination of fetuses, children and adults, I consider a mesentery to the vertical colons as an abnormality, as an exception. The solving of the problem of the existence of a mesocolon dextra et sinistra must depend on observations through fetal, adolescent and adult life. In the second half of fetal life the growing kidneys appropriate the vertical mesocolons so

much that the posterior surface of the right and left colons become more or less fixed to the connective tissue of the dorsal wall. So far as my examinations are concerned the colons never regain their mesentery. It is true that I have in perhaps 3 to 4 per cent. of cases found a partial mesocolon at the upper end of the descending colon, but in such cases the descending colon was generally in a contracted state. At the lower end of the right colon it is often very free, *e. g.*, when the cecum lies on the pelvic floor. But in such cases the peritoneum does not depart from the posterior surface of the colon for several inches above the entrance of the ileum. The lower end of the left colon is generally quite fixed where it crosses the psoas muscle. In certain very spare youthful subjects the connective tissue behind the colon, especially the left, is very loose and extensible. But such subjects lost their fat rapidly. In such cases it is easy to demonstrate a mesocolon descendens by slight traction on the bowel. The degree of extensibility of both right and left mesocolon is considerable and should always be taken into account. It is a rule that the colon ascendens is minus a mesocolon at birth and the bowel is fixed to the dorsal wall. It is a very common and general rule that the colon descendens has no mesocolon at birth and that the bowel is fixed to the dorsal wall. This rule is, according to my experience, established for both vertical colons at the fourth fetal months.

The great utility of mesocolons or no mesocolons has lost its chief significance at present, on account of the impunity of safely entering the peritoneal cavity. Lumbar colotomy or colotomy by entering the bowel on its surface not covered by peritoneum is rare at present, in fact, frequently difficult to perform.

My investigations convince me that the normal vertical colons of man possess no mesentery. These portions of the large bowel are connected with the dorsal wall by connective tissue. They lost their posterior serous covering by the growing kidney having taken and appropriated it to return it no more. The transverse colon possesses a four inch mesentery, short at either end and elongated in the middle, perhaps by the expanding stomach whose blade continues on to embrace the stomach at its lower curvature. That portion of the large bowel between the lower end of the kidney and the upper end of the rectum has a peculiarly elongated mesentery known as the mesosigmoid. It suspends in its fold the sigmoid loop, the S-romanum or the pelvic loop. As the sigmoid loop with its mesentery is of growing interest to the abdominal surgeon, I carefully investigated some two hundred subjects of all ages from a four weeks' old fetus to subjects of 80 years of age. In animals, as the carnivora, there is no sigmoid as one can easily observe in the dog and cat. In the solipeds as the horse, one can see an enormous sigmoid loop with an astonishingly long mesosigmoid, with beautifully ordered nerves, lymph and blood vessels coursing through it. The mesosigmoid then belongs only to animals of certain classes which originally required a long digestive canal to retain the food a considerable time during its passage for absorptive purposes. Yet, after all, the sigmoid loop and mesosigmoid is a result of a mode of development especially due to the peculiar late use and growth of the kidney.

I shall include in the mesosigmoid all that part of the mesocolon which lies between the lower end of the descending colon and the lower end of the mesorectum. In short, the mesorectum and the mesosigmoid will be considered as one peritoneal support and called the mesosigmoid. As Treves remarks, the sigmoid flexure and rectum said to possess a mesentery, can not be separated. All the large bowel which lies below the lower end of the descending colon and possesses a mesentery we shall designate as the sigmoid flexure, and the peritoneal support the mesosigmoid. Pittard suggested fifty years ago that we should not separate the mesorectum and mesosigmoid. In all the anatomies in command it is plain to observe how the description of the sigmoid flexure or the S-romanum has been handed down from book to book and from generation to generation—one writer copying his predecessor without a shadow of variation.

Fig. 621.

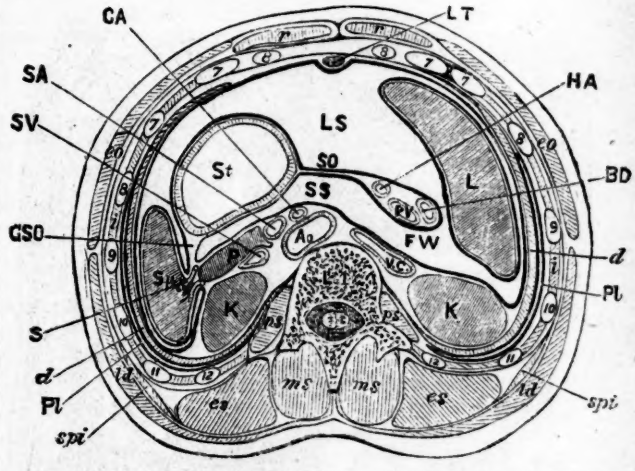

Fig. 47 (after R. J. Goodlee, 1882, in Quain) represents an instructive cross section of the abdominal cavity on a level with the foramen of Winslow. L. 1, first lumbar vertebra. The peritoneum is shown by a Ps—psoas muscle; d, diaphragm; A o, aorta; V c, vena cava; S A, splenic artery; S V, splenic vein; C A, coronary artery; S, splenic vessels cut as they enter the spleen; H A, hepatic artery; P V, portal vein; B. D., common bile duct; L, liver; St, stomach; K, kidney; F W, Winslow's foramen; S S, bursa omentalis; P, pancreas; Sp, spleen; S O, small foramen; L T, ligamentum teres; G S O, gastro-splenic omentum; L S, great omental cavity. The peritoneum can be traced from the middle line anteriorly, where it is seen covering the round ligament of the liver and forming the beginning of the suspensory ligament of the liver, along the right side of the abdominal wall, over the front of the right kidney to the inferior vena cava, where it forms the posterior boundary of Winslow's hiatus. From Winslow's foramen the bursa omentalis extends over the pancreas and left kidney as far as the spleen, whence it is reflected backward, along the posterior wall of the small omentum to the anterior of the foramen where it merges into the large sac. The peritoneum turns around the hepatic vessels and forms the anterior of the gastro-hepatic omentum which covers the anterior surface of the stomach and forms the gastro-splenic ligament as it reflects itself on the spleen. The spleen is nearly all enveloped by peritoneum and from its posterior border the peritoneum is reflected on the diaphragm on to the posterior dorsal wall to the middle line.

It is an anatomic literary legacy anciently started by some cloistered monk of Esculapius. It is not always the most wise to introduce new terms, but some seven years ago I began to investigate the sigmoid loop and mesosigmoid and after the examination of over two hundred cases I am convinced that the old division of the mesentery into mesosignoid and mesorectum is artificial, confusing and unnatural. Beside one can not find any distinct anatomic division or landmark between the mesosigmoid and mesorectum, nor between the loop and rectum. The description given by some of the best English works in anatomy in regard to the sigmoid and its mesentery is to say the least meager and indefinite. "Quain," ninth edition, occupied, according to the British mind the proud position of being the best English anatomy extant. The following is the description which this

anatomy offers on the sigmoid flexure (page 616, vol. II.): "The sigmoid flexure of the colon, situated in the left iliac fossa, consists of a double bending of the intestines upon itself in the form of the letter S, immediately before it becomes continuous with the rectum at the margin of the pelvis opposite to the left sacro-iliac articulation. It is attached by a distinct mesocolon to the left fossa and is very movable, falling into the pelvis when the bladder is empty. It is placed immediately behind the anterior wall of the abdomen or is concealed only by a few turns of the small intestine. The sigmoid flexure is the narrowest part of the colon. The description from a prominent anatomy is not only meager, but absolutely misleading. In the first place my examinations show it is seldom situated in the left iliac fossa; and, 2, that its mesentery does not attach it to the left iliac fossa; and 3, it does not assume an S-shape. So that

Fig. 48. This figure I sketched to illustrate the mesosigmoid, the sigmoid loop, the psoas muscle and the intersigmoid fossa. 1, psoas muscle; 2, line of insertion of mesosigmoid; 3 points to the intersigmoid fossa; 4 is placed on the iliac muscle at the junction of the lower end of the colon and upper end of the sigmoid loop; 5 is near the hook which suspends the S-iliac.

investigations in general, do not agree with Quain in situation, attachment or shape. Also I can assert that the junction of the mesosigmoid and mesorectum (or the bowels) at the left sacro-iliac joint is not what nature generally presents. No one can see a division between the sigmoid bowel and the rectum.

The first and most significant matter to investigate is the origin, cause and final location of the mesosigmoid. This is naturally determined by examining fetuses of all ages, the newborn children and the adult. In the fetus the descending mesocolon is inserted directly in the middle line of the body from the second lumbar vertebra to the end of the sacrum. At the end of the third month of gestation, one finds that the kidney is beginning to increase rapidly, insinuating itself between the blades of the descending mesocolon. As the kidney increases in size it grows toward the left—the line of least resistance and forces the colon leftward with its mesentery. But the leftward moving of the descending mesocolon only takes place as far downward as the lower pole of the kidney; that portion of the mesocolon extending from the lower pole of the kidney to the rectum does not, at first, move to the left, but constitutes what we include in the mesosigmoid. Now the position of the mesosigmoid varies much as regards its position in early life. I have examined a child eighteen months old with the mesosigmoid inserted directly in the mid-dorsal line as high as the second lumbar vertebra—even higher than the lower pole of the left kidney. In others the whole mesosigmoid may move to the left, earlier. Occasionally, in adults, it was found that the mesosigmoid had moved but slightly out of its original mid-dorsal insertion. However, generally by the sixth month of gestation the mesosigmoid has begun to move definitely toward the left, *i.e.*, its mid-dorsal insertion has begun to shift its line downward and outward toward the left iliac fossa. The left blade of the mesosigmoid in my opinion, becomes displaced, drawn out with the advancing leftward mesosigmoid insertion followed by the right blade covering up the old line. The various forces at work shoving the mesosigmoid line of insertion leftward

Fig. 49 I sketched from a post mortem examination of a 6-months-old child in which Dr. Waite and I performed the autopsy. We found an enormously long S-iliac, as shown in the figure, reaching into the right iliac fossa and existing in the state of a volvulus; a and b represent the mesenteric axis around which the loop c has rotated. The volvulus at the autopsy did not seem twisted tight enough to cause obstruction. The figure illustrates the notable long S—iliac found in the newborn.

are: (*a*), the rapidly increasing packet of small intestines; (*b*), the large left lobe of the liver; (*c*), the rapidly increasing left kidney; and (*d*), the increased lateral abdominal space.

It is thus noted that the mesosigmoid moves from its mid-dorsal insertion to its left iliac insertion gradually. I have actually observed in fetuses and children that it will require two years after birth in some subjects for the mesosigmoid to assume its oblique adult insertion. In one adult it could be said that it had only partially moved from its original insertion. In other adults it could be observed that the mesosigmoid had its insertion excessively to the left. Also, it was frequently noted that the line of the mesosigmoid insertion varies very much. The upper end may advance much more than the lower end or *vice versa*. The line of the insertion of the mesosigmoid in adults begins at the lower end of the ascending colon and ends at the point where the rectum leaves its mesentery. The lower end of the ascending colon is at a point where the bowel begins to pass transversely across the psoas muscle at its outer border. The lower end of the mesosigmoid is

at a point where the mesorectum ceases, or at the third sacral vertebra. The course of the line of insertion of the mesosigmoid in the adult may be described as follows: the line begins just below the lower pole of the left kidney and passes generally in a curve or transversely over the psoas muscle. Sometimes the line of the mesosigmoid insertion and the ureter converge to a point at the ureter at the right side of the psoas muscle. The line then runs irregularly midway between the right edge of the psoas muscle and the mid-dorsal line, downward into the pelvis on the anterior surface of the sacrum, varying in its point from the right to the left border of the sacral anterior surface. In fetal life the line of insertion of the mesosigmoid may pass in its middle point up to the second lumbar vertebra, or even to the lower end of the duodenum where the spermatic vessels emerge which aid in forming the conical intersigmoid fossa. The base or dorsal line of the sigmoid varies very much in its length. It may be four or twelve inches but will probably average six. This line in many adults extends directly from the lower pole of the left kidney to the point of disappearance of the mesosigmoid at the third sacral vertebra. The basal insertion of the mesosigmoid is nearer the median line than distal or periphery, *i.e.*, the S-romanum. The length of the distal line of the mesosigmoid I measured in fifty adult subjects and its average was sixteen and three-fourths inches. With a base line of six inches and a distal bowel line of sixteen inches it gives the mesosigmoid a fan or truncated cone-shape very similar to the shape of the mesenteriolum. The shortest adult base mesosigmoid line was eight inches, while the longest distal was twenty-eight inches in fifty subjects. The length of the mesosigmoid from the dorsal line of insertion to the bowel is an average of two and one-half inches. In fifty subjects the longest was five inches and the shortest an inch and a half.

(*To be continued.*)

SOCIETY PROCEEDINGS.

Chicago Pathological Society.

Regular Meeting, June 10, 1895.

WELLER VAN HOOK, M.D., President, in the chair.

DR. E. FRIEND read a paper on

A CASE OF LICHEN RUBER PLANUS.

I take the liberty of presenting before you this evening a patient, affected with not an altogether common, yet at the same time to my mind, rather interesting example of generalized lichen ruber planus, or as is more commonly known here in America, lichen planus. The patient was kindly referred to me at the United Hebrew Charity Dispensary, by Dr. Fischkin. Her history sheet read as follows: Mrs. Anna O., nationality American, age 40 years, occupation nurse, family history negative. Patient is of a dark complexion, dark eyes and hair, height five feet five inches. Weight 105 pounds, which is 30 pounds less than she weighed last Christmas. Previous history: during childhood, patient had measles, typhoid fever, mumps, since which time the patient has been quite well, to the time of the birth of her third child, which was twelve years ago; since this time patient has been troubled with a supposed bladder affection, which manifested itself by a frequent desire to urinate, and a burning and smarting pain while urinating. The urine remaining clear at all times. This has persisted more or less up to the present time, when patient urinates about every hour, and sometimes a "spasm" as she terms it preventing her urine passing freely. *Status Præsens:* her present disease began in January last, with a severe chill which lasted three hours, followed by fever and a tired, drowsy, sleepy feeling. The patient stated she was entertaining friends at the time and had to desist, one of her lady friends remarking that she had never before seen Mrs. O. in an intoxicated condition. Following these symptoms, she had a severe headache, and two days afterward she noticed an eruption in the right pectoral region of the chest characterized by separate and discrete millet seed to split pea sized shining, polygonal, and round, bluish or pinkish papules, with a central depression, (so well likened by Kaposi to a piece of wax, upon which an impression had been made with point of a pin), hard and firm to the touch. The color disappearing somewhat on pressure.

The post-cervical lymphatics became and are still enlarged. This eruption spread along the right side of the chest, thence to the neck, opposite side of the chest, back, flexor surfaces of the arms, but better marked on the fore-arms, abdomen and inner and outer aspect of the thighs and legs. On the abdomen the eruption is more marked, at the waist band line, and here especially those papules undergoing involution leave a characteristic, sepia brown pigmentation and the appearance of an atrophy of the skin. The itching which was very slight during the entire course of the disease was present here to greater extent than in any other portion of the body. The inguinal lymphatics are enlarged, especially in the right inguinal region to the size of a pigeon's egg, separate, distinct and tender to the touch. In a number of places on the back, the papules are arranged in chains, or like beads on a string and correspond to Kaposi's lichen ruber moniliformis.

The physical examination reveals the mouth entirely free from any affection. Heart and lungs normal, abdominal viscera normal, with exception of the spleen, which although apparently not enlarged is quite tender, both on percussion and palpation. Vaginal examination reveals nothing abnormal with the exception of a cervix laceration, which the patient is unaware of and does not trouble her in the least. The urethra for some distance is the seat of a number of small hyperemic polypoid growths, these having been removed from time to time by a number of different physicians. Appetite is ravenous. Bowels are regular. Menstruation regular and painless. Urinary analysis negative. The patient's treatment has been the Asiatic pills one after each meal, and locally Unna's salve composed of carbolic acid, 20, corros. sublimate 1 part in benzoated oxid of zinc basis 500; she has made quite an improvement in about one week's treatment. The patient kindly allowed me to excise a section of skin of her back containing a number of typical lichen papules, for histologic examination, which I am sorry I can not present to you this evening owing to the lack of time required in preparing them.

Appendix. The histologic examination of a section of the skin involved in the bead-like formation, which was fixed in picric acid and bichlorid of mercury, hardened in alcohol, and stained in alum carmine, revealed the following pathologic changes: over each papule, the epidermis was much flattened, especially the lining layers beneath which the papillæ were literally packed, with a round cell infiltration and in those papillæ not the seat of such a dense infiltration, the capillaries were very much distended. This infiltration of round cells also followed along the hair follicles and sebaceous ducts, but seldom deep in the corium. There was to some extent a hypertrophy of the rete malphigii. A bacteriologic examination was made with negative results.

This case seems of particular interest in that a number of subjective and objective symptoms point toward an infectious nature of the disease, as Lassar believes, and who has found a bacillus supposed to be responsible for this disease:

1. The suddenness of its onset.
2. Beginning with a chill and followed by a marked fever, and general malaise.
3. Enlargement of the lymphatics.
4. Rapid loss in weight.
5. Marked tenderness of the spleen.

DR. C. D. WESCOTT reported a case of

FIBROSIS OF BOTH OPTIC NERVES, FOLLOWING FRACTURE OF THE BASE OF THE SKULL.

By the courtesy of my friend, Dr. Hektoen, professor of pathologic anatomy at Rush Medical College, I am privileged to report the following rare case. I know of no case in my own experience or in my reading which is parallel:

A young, vigorous man, 23 years old, died from acute, general, serofibrinous, leptomeningitis after an illness of two days, characterized by coma, opisthotonos and other grave symptoms. The following history was obtained: one year previous he fell from a United States mail car while the train

was running at the rate of about forty miles an hour, and sustained a compound fracture of the frontal bone, on which account he was confined to his bed for seven weeks. Some bone was removed. During the first few days after the accident he is reported to have had convulsions, but since his recovery he has attended to his duties as railway mail clerk. Shortly before the fatal illness he noticed that his eyesight was rapidly failing and as near as it can be learned it was the left eye in particular that appeared to give out. At the post-mortem examination there was found a cicatrix in the left frontal region beginning about one inch above the left supra-orbital notch, and describing a semicircle toward the left, ending in the median line three inches above the point of commencement. In the forehead, corresponding to the lower portion of this scar, was a depression in the bone one inch long transversely, and half an inch wide vertically; this depression was due to a loss of substance in the bone, the entire thickness of which was replaced by firm, white, fibrous membrane adherent to the scalp and to the dura mater. The dura was also firmly adherent to the floor of the skull in the left anterior fossa and manifestly thickened in the adherent parts. There were no old fibrous adhesions between the pia and the dura. In the pia was a marked sero-fibrinous inflammation with turbid fluid in the ventricles and at the base. There were no abscesses in the brain. There was considerable deformity in the bone forming the body of the sphenoid and the cribriform plate of the ethmoid, but there was no dead bone and there was no suppuration in the pericranial cavities such as the ethmoid sinuses, the ears, etc. There seemed to be much firm fibrous tissue about the optic nerves in front of the commissure and extending through the optic foramina and sphenoidal fissures into the orbit for a little distance. As the optic nerves passed through the foramina they were imbedded in this firm scar-like tissue and appeared compressed, the left more so than the right. The commissure and optic tracts did not show any changes to the naked eye. The other organs in the body were free from any chronic disease. The sections of the nerves removed have been submitted to Dr. E. R. LeCount, for microscopic examination and the following is his report:

The right nerve (cross section) shows very slight thickening of the perineural connective tissue. The nerve bundles are completely degenerated throughout the whole diameter of the nerve, and in place of cross sections of nerve fibers are seen, instead, a granular *débris* and the nuclei of endoneural connective tissue. Here and there, but seen only seldom, are cells which resemble neurilemma nuclei. The left nerve also on cross section shows a great increase in the perineural or interfasicular connective tissue. It is thickened, more fibrous, hyalin looking and homogenous-like cicatrix tissue and the spaces formerly occupied by nerve bundles in place of being circular in shape are angular, compressed, of various shapes and very irregular. There is an excess of cells and nuclei in these spaces—none of these, however, resemble leucocytes. There is complete disappearance of nerve elements proper.

DR. A. E. HALSTEAD read an abstract of a paper on

FLOATING BODIES IN JOINTS.

Floating bodies in joints, or joint mice, are bodies usually composed of bone, cartilage, masses of fibrin or fat, or fibrous tissue, either loose in the joint or attached to some part of the joint surface by pedicles. A majority of these bodies are found in the knee joint, some in the elbow, and rarely in the ankle and wrist. The reason for the frequent occurrence in the knee is that its surface is large and, by its position, it is greatly exposed to traumatism.

Etiology—Classifications—1. Those found in otherwise healthy joints, the disease, if any, occasioned by the presence of the bodies.

2. Those found in diseased joints.

In healthy joints. (*a*), of purely traumatic origin. Very rare cases reported by Volker, Fischer and Feurer. (*b*), composed of separated pieces of cartilage or of bone that were not broken off at the time of injury, but became detached later. The osteochondritis dessicans of König and quiet necrosis of Paget. Cause unknown. (*c*), those originating from hemorrhage into a sound joint, as result of traumatism. Exceedingly rare. Cases reported by Gurlt, Fischer, Shattock and Bowlby. (*d*), those caused by drawing into the joint foreign bodies embedded in the capsule, such as bullets, needle points, etc. Case reported by Shaw.

In diseased joints. 1, So-called corpora oryzoidea in tubercular hydrops articuli and hydrops fibrinosis of Volkmann and Ranke. Originate (*a*), as pure concretions. (*b*), desquamated epithelium forming nuclei for deposit of fibrin; (*c*), detached villi. (*d*), those originating from cartilaginous metamorphosis of synovial membrane or fibrous layer of capsule drawn into the joint. Cases reported by Klein, Fischer, Delgarde and Schmidt. (*e*), those resulting from pathologic changes occurring in normal joint villi, with subsequent detachment of villi. (*f*), those which occur in arthritis deformans. Case reported by Recklinghausen.

Growth of body. Body is observed to increase in size in one of my own cases, and others reported, probably: (*a*), by deposition of successive layers of fibrin; (*b*), proliferation of cartilage or bone cells nourished by synovia.

Symptoms. (*a*), sudden locking of joint, usually in position of extension, any attempt at movement causing severe pain; (*b*), acute synovitis from one to four weeks; symptoms recurring usually three or four times a year; (*c*), crepitation and lengthening of femur usually present. Increased length of femur in one of my own cases of fully 3 centimeters.

Diagnosis. 1, sudden pain in otherwise healthy joint; 2, acute synovitis, with no other apparent cause, make probable diagnosis, and 3, locating floating body makes it positive.

Treatment—(pre-antiseptic)—1. Palliative: (*a*), fixation of loose body by compression; (*b*), by passing needles through the capsule; (*c*), by subcutaneous ligature.

2. Radical: (*a*), removal through direct incision; (*b*), incising skin and capsule at different levels; (*c*), subcutaneous operation performed at two sittings. Mortality was very high and complete recovery rare.

Antiseptic. By direct incision, preferably under local anesthesia, (Schleich's method .02 per cent. cocain), capsule sutured with catgut, skin with silkworm gut; no drainage or irrigation. Patient should walk in one week.

Three cases reported, two of so-called osteochondritis dessicans.

Conclusions—1, so-called osteochondritis dessicans explains most cases in normal joints; 2, few, if any, result from direct violence; 3, chief symptoms, sudden pain and locking of joint in nearly extended position, followed by acute inflammation; 4, lengthened femur may occur from irritation caused by pressure of these bodies; 5, direct incision, as soon as diagnosis is made, preferably under cocain anesthesia, is the only treatment.

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THE PRESIDENT.—Some recent investigations in reference to the physiology of joints may have an important bearing upon the production of joint bodies, or, at least, upon their growth after they have once gotten loose.[1] It seems that the serous membranes of the joints do not stand in open communication with the lymphatic vessels of the extremities, as has been thought; which means that fluids effused into the joints are not readily resorbed. This result derived from experimental study is in harmony with the fact, well-known for years, that fluid effused into a joint is much more readily gotten rid of if there is a rent in the capsule than if resorption has to take place solely from the surface of the serous membrane itself. The practical bearing of this fact upon the formation of joint bodies is this, that resorption of small masses of tissue once loosened is slow, and that resorp-

tion of fluid produced by the irritation of the synovial membrane is also slow, so that quantities of fibrin can be deposited upon the surfaces of loose bodies, and a large quantity of nutriment is supplied for the growth of these masses, thus enabling them to reach a considerable size.

Dr. S. L. Weber—There is one point in the etiology of foreign bodies in the knee joint that I wish to speak of, and I do not know that I have seen it referred to. As to the kind of bodies, the essayist has described them well. They are not of traumatic origin; that is, they are not due to blood clot. A large majority of these bodies are apparently attached to the intra-articular ligaments, very close to the villi of the joint, and they sometimes start from there. What can be the cause of that? Why does such a formation of cartilage occur within the joint? Why does it not occur in other joints as well as the knee joint? My point is this: We know the knee joint originally was a double joint, and that the ligaments running from the patella to the inner surface of the condyles are the remains of a former wall between the joints. Just the nature of the wall I do not know, but it must have been cartilaginous, possibly bony, and that in the evolution of the knee joint this cartilaginous wall has gradually been done away with, and we have now one joint instead of two. I think the formation of this cartilage in these intra-articular ligaments is a relapse to the former evolutionary type, not a degeneration. I think that point, which I have never seen made, will explain the formation of these cartilaginous bodies, or a large percentage of them as found in the knee joint, and why they occur in the knee joint and not elsewhere.

Dr. Halstead (closing)—The reason why these bodies occur more frequently in the knee joint than in any other is because this joint, on account of its position, is more generally exposed to trauma, and in the second place because of the large surface over which the trauma may be distributed. It is said that some of these joint bodies are due to a so-called osteochondritis dessicans. I do not think we have usually degeneration of the villi of joints, but sometimes we may have. Klein, in his histology, has shown by cuts and the text that the synovial membranes of the joints, especially the knee joint and also the villi, contain cartilage cells. I said in my paper that in most cases where villi formed loose bodies in the joint, in 95 per cent. of them there would be some inflammatory condition of the joint previous to the appearance or existence of the bodies. Cartilage cells are normally present in every joint, and we need not go back to the evolutionary period for their existence. Take any normal joint and we will find in it cartilage cells, and we know that inflammation will stimulate their growth, so that later they may become detached.

(*To be continued.*)

Mississippi Valley Medical Association.

Abstract of the Proceedings of the Twenty-first Annual Meeting, held in Detroit, Sept. 3, 4, 5 and 6, 1895.

(*Concluded from p. 462.*)

Dr. C. B. Burr, of Flint, Mich., read a paper on

THE PARANOIAC—A MENACE TO SOCIETY.

He made brief and pointed reference to the numerous recent murders of prominent persons by so-called "cranks." What to do with these persons is one of the problems confronting our modern civilization, and is one demanding an answer from students of the subject. We have room enough in our asylums. The trouble is, harmless lunatics are kept in confinement, while dangerous paranoiacs are allowed their liberty. These murders disturb the public but a day, and do not scare us into further provision for a safeguard. The public do not sincerely seek advice from professional sources in the matter. No one who has been threatened by a paranoiac would be willing to have his commitment settled by a jury without medical testimony as to the danger involved in granting freedom to such an individual. The paranoiac is a menace to society and should be sequestrated. But doubtless the public will continue to view with indifference or approval, now and then, the execution of a criminally insane person as "sane enough to hang," and vainly hope for a deterrent effect of this example upon other deluded minds.

Dr. I. N. Love, of St. Louis, remarked that doubtless all of us would hesitate to offer criticism on so valuable and thorough a paper from such an authority as Dr. Burr. He then related a case in St. Louis where a man had murdered his wife and child, having become a paranoiac through excesses and debauchery. The entire profession of St. Louis agreed that it was the work of a paranoiac, yet a country jury declared he was sane enough to hang. He emphasized the fact that often these people are stimulated to crime by the notoriety the newspapers give them, and consequently the papers should be encouraged to suppress such items.

Dr. Hugh T. Patrick, of Chicago, called attention to the fact that the fixed illusions began as early in life as 5 and 8 years, and then in such cases measures of restraint should be instituted. These illusions are not always discovered, even by the family physicisn.

The next paper was by Dr. A. E. Sterne, of Indianapolis, entitled "Toxicity in Hysteria, Epilepsy and Neurasthenia," which will appear in full in the Journal.

Dr. Hugh T. Patrick, of Chicago, followed with a paper on

SOME OF THE MORE RECENT METHODS OF STAINING NERVE TISSUE.

The article was elegantly illustrated with water color drawings of each of the stains used in nerve tissue, and a most thorough and practical resumé of the subject, with its application and technique was given. He considered the method of Nissl to be the method *par excellence* for nerve cells. With it, minute changes in the cell structure could be detected which would elude any other method. The method of Bevan Lewis, while marking an advance in technique, was thought to be less perfect than claimed for it by the originator. It is, however, excellent for hypertrophied neuroglia cells. The beautiful results obtained by the Golgi method, as modified by Ramon y Cajal, were illustrated and the importance of the discoveries due to it were emphasized. Rosin's stain which is practically the Ehrlich-Biondi blood stain, gives in some cases almost ideal results. The method of Flatner—chlorid of iron and diniero-resorcin—was illustrated as applied to normal and degenerated nerve fibers, and the Doctor thought the method was to have an important future. The method of Marchi was said to excel any other for degeneration of from three weeks' to three months' duration. Allusion was also made to the developmental method of Flechsig, and to an unusual but valuable result of the Weigert-Pal stain and illustrated drawings shown.

Dr. Sterne said that the carmine stain has a particular adaptability for double staining. In bringing out the anatomic details it is practically a necessity. The Nissl stain is the most exact, and for giving an idea of the ganglionic structure can not be excelled. For all purposes the Marchi method is perhaps the most reliable.

Dr. Patrick said he had simply pointed out the advantages of each method. We want for each case that which will give us the best results.

Then followed a paper by Dr. A. P. Buchman, of Fort Wayne, Ind., entitled

PSYCHOLOGY IN MEDICINE.

The author discussed the subjective and objective relations of mind and pathologic conditions. The unit force acting properly is health; abnormal action of this unit is disease. The structure of man is governed by a connected train of associated movements called ether, of the existence of which we can have no anatomic proof; but to which the growth of the body must bear definite relation. Fear, grief, anger or joy modify the functions of the vital centers. The sympathetic nervous system is the center of the emotions, and the cerebro-spinal system of that of abstraction Thus we come to psycho-physiology and bio-chemistry. Thence we step to the subject of hypnotism. The different methods used in producing hypnotism were minutely described; then the possible uses and dangers of hypnotism in medicine were discussed, showing that while good might be done, there was also much danger in its use.

Dr. Sterne said it was giving the hypnotizer a dangerous power. Any one can hypnotize, as only a certain mental concentration is necessary. The interest in the subject is not so much a medical as scientific one. There is frequently, if not always, an element of fraud in hypnotism. There is a chance of murderers claiming they were hypnotized.

Dr. Patrick emphasized the fact that the hypnotist has no hypnotic power. It seems almost a farce to discourage this idea, as it was exploded a century ago. It is purely a subjective influence.

Dr. Burr remarked that the insane could not frequently be hypnotized. They could, if the hypnotizer had any power in reality. It is possible in epilepsy to do much with it; also in hypochondria and melancholia it might be valuable.

Dr. Buchman claimed the French Academy had in the past ten years positively demonstrated the existence of hypnotic power.

[1] Braün: Deutsche Zeitschrift für Chir. Bd 39, H. 1 and 2.

DR. PATRICK said, in rebuttal, he did not claim that there was no such thing as hypnotism, but that the hypnotizer had no direct power in himself over the subject hypnotized.

DR. C. J. HELM, of Peru, Ind., then presented a paper on "The Nervous System as a Factor in Disease." The paper was an excellent resumé of a great subject, and to make a notice of the points made without free excerpts is impossible. Slight functional disturbances, if constant and continued, may produce actual organic lesions. Change is the great remedy for these troubles, not necessarily of surroundings but of the waste places in the nervous system; give the forces some new direction. Study your patients in every phase. Get them out of the ruts they have gotten into, and you will have then cured your patients before you know it.

DR. ROBERT H. BABCOCK, of Chicago, presented "Some Considerations with Regard to the Senile Heart." The condition is not always due to age or necessarily found in the aged. Importance should always be given to the myocardial changes. Dyspnea is a most frequent symptom of senile heart, although it occurs in other conditions as well. It finally becomes the almost surely fatal symptom—Cheyne-Stokes respiration. Various remedies were advised, and among them the hypodermic use of morphia in a single dose.

DR. FÜTTERER, of Chicago, said we sometimes find in these cases a more or less intermittent pulse.

DR. J. B. HERRICK, of Chicago, added his testimony with regard to arythemia, which he considers a frequent and most important symptom.

DR. BABCOCK said that the intermittence is not necessarily a dangerous symptom, but at the same time any such senile heart is liable to stop during one of these diastolic irregularities coming on suddenly. In Cheyne-Stokes respiration morphia seemed to act best with small doses of atropin.

DR. FRANK BILLINGS, of Chicago, presented a paper on "Intercostal Neuralgia." The disease is always secondary and consequently, in reality, only a symptom. It may be due to toxic forms of functional nerve disturbance, or to pressure by tumors. The functional form is most common and usually due to a defective excretion or mal-assimilation. Indigestion is a most frequent factor, whether due to the character of food ingested or to nervous conditions. Insufficient food and lack of outdoor exercise are frequent causes. Intercostal neuralgia occurs oftener in females, usually on the left side. Palpitation is usually present. Gas in the stomach with eructation is always present. In diagnosis we must always search for the cause. It may be confounded with pleurisy or muscular cardiac rheumatism. In treatment, remove the cause and give any simple restorative tonic.

DR. W. H. PORTER, of New York, read a very exhaustive paper entitled "New Light on the Rôle which Iron Plays in the Physiologic Economy—How and where does the Hemoglobin come from?" It is not the product of synthesis. It is difficult to formulate a nucleo-albumin. The iron is not excreted by the salivary, gastric or sweat glands. The hair uses up some, the urine a slight amount. The bile uses most, but the total in both hair and bile is only one-tenth grain daily. Some writers say that the iron is stored up in the liver, but this is not practical. The intake and output both being very small, we must conclude that iron in the body is very stable. There is then a question whether iron should be so frequently and indiscriminately used in anemia.

DR. JOHN NORTH, of Toledo, had almost given up the administration of iron in cases of anemia. In most cases we should correct the trouble in the alimentary canal, avoid the destruction of the nucleo-albumins, and no iron will be needed.

The paper of DR. JOHN AULDE, of Philadelphia, on "The Abortive Treatment of Typhoid Fever," was read by the Secretary of the Section. The author reviewed the advantages of guaiacol, carbolic acid, salol, betanaphthol and others, and finally gave his own and others' experience with arsenite of copper, stating that, in his opinion, the disease could be aborted at almost any stage by the use of copper arsenite with appropriate constitutional remedies. As a rule 1-100th gr. should be given every four or six hours. The remedy may be given hypodermically if the disease be advanced to the second or third week.

DR. GUSTAV BLECH, of Detroit, read a paper on "Medicinal Treatment of Typhoid Fever." The author opened his paper with: "There is no specific treatment for typhoid fever." Hydrozone, 1-32, is a most valuable intestinal antiseptic. Irrigation of bowels with cold water is a necessary adjuvant in all cases.

The two preceding papers with that of DR. J. E. WOODBRIDGE, of Youngstown, Ohio, on "Typhoid Fever and its Abortive Treatment," were read in succession and discussed jointly.

DR. LOVE said the treatment suggested by Dr. Woodbridge was not original; that all physicians had used the same for years. He protested against the use of the term, abort, as he thought it could not be done. Rest is an important factor in the treatment. Typhoid fever is a matter of diagnosis. He questioned the diagnosis of typhoid in some of the cases reported by Dr. Woodbridge.

DR. NORTH would change the word abort, to miscarriage. The germs do not enter the circulation. If we can discover something which will eliminate the germs, we can thus cut short the attack. The constant study of the one disease is the only way to progress. He does not think one can become too enthusiastic, but conclusions can be drawn too hastily.

DR. PORTER said "abort" is an unfortunate and misleading word. We can decrease the intensity and cut shorter the duration of an attack with such remedy. It can not be abortion in any germ disease.

DR. J. B. HERRICK said in an experience with over one thousand cases of typhoid fever, he is inclined to think that there is no specific for the condition. For the febrile condition, he does not consider anything equal to the cold bath. Even Woodbridge's treatment is an expectant one.

DR. WOODBRIDGE, in closing, made reference to former discussions and papers by himself and others. Even if we could exclude the diagnosis of genuine typhoid in these cases, what better treatment can we find for the condition? When, however, the rose spots appear along with the usual symptoms, we must admit it is typhoid fever, and these cases can all be aborted in a few days.

DR. E. L. SHURLY, of Detroit, presented a paper on "Treatment of Pulmonary Consumption in Hospitals." For many reasons the treatment in general hospitals is not practicable. Other patients and dangers of contagion, whether real or imaginary, are important factors. Homesickness and poverty are also against it. Foreign hospitals for tuberculosis are successful, but the conditions are different in this country. The Harper Hospital of Detroit has been the nearest a success of any American institution. Americans are too restless and have not patience enough to test the system. The hospital must not only be thoroughly equipped, but located in an equable climate.

DR. GUSTAV FUTTERER, of Chicago, at the same time presented his paper on "The Direct Cause of Tuberculosis," which will appear in full in the JOURNAL.

DR. E. B. DENCH, of New York, read the paper on

THE TREATMENT OF ACUTE INFLAMMATIONS OF THE MIDDLE EAR AND MASTOID PROCESS.

For convenience, the author anatomically divided the middle ear into two parts, by a line drawn through the styloid process. Inflammations in the middle ear produce the ordinary results of the same process elsewhere within a cavity lined by a mucous producing membrane, but because of transfusion the tissue necrosis is not so extensive; yet there is enough retained to cause an outward bulging of the tympanic membrane. If seen early, free blood letting should be practiced and a single dose of an opiate given. Do not give but one dose of the opiate under any circumstances. Also apply dry heat locally. Do not use wet heat. If not seen until later, free opening is the only thing to be advised. The technique of the operation was minutely and carefully described. The more acute and severe the case, the more prompt should be the measures for relief.

An incision should be made often, even when it is known the cavity contains no fluid. The incision does not end the danger; the entire cavity must be thoroughly washed out and made antiseptic by irrigation.

"Sequelæ of la Grippe." This paper was read by DR. F. C. HEATH, of Indianapolis. Several cases of eye results were given and the more common condition of ear complications noticed, with treatment considered.

In the discussion, DR. STRAIGHT thought the stomach was the most frequently affected of all organs.

DR. NORTH said quinin given for la grippe had done more damage than any other one thing.

DR. WHEELOCK saw two distinct kinds of reaction following in ear cases with periostitis or middle ear abscess.

DR. J. M. BALL, of St. Louis, read a paper entitled "Artificial Ripening of Cataract." A complete history of the operations was given, and the various methods were explained. Before doing any of them, the surgeon should be sure the zonula is intact, the tension normal, and the pupil dilatable. Division of the anterior capsule in these cases is always more or less dangerous and may be serious. Bettman's operation or direct massage or trituration is of all the most desirable. It is the least dangerous, most certain, and speedy. It has

stood the vital test of experience, and is worthy of confidence. If prolapse of the iris occurs, snip it off at once, contrary to most authority, but he had found it satisfactory and beyond expectations.

Dr. J. O. Stillson, of Indianapolis, read a paper entitled, "Complications in Cataract, Arising from Diabetes, Albuminuria," etc. The diabetic cataract is as yet a puzzle. A serous retinitis is often a symptom of Bright's disease. Albuminuria is a frequent complement of cataract. It is not only desirable but necessary to treat these conditions if they exist, before operating for the senile cataract.

Dr. K. K. Wheelock, of Fort Wayne, Ind., read a paper entitled "Rheumatism and Gout in its Relation to the Eye." The paper was a thoroughly practical one and presented this somewhat old but nevertheless important subject in an interesting manner. The paper elicited a warm discussion.

Dr. G. W. McCaskey, of Fort Wayne, Ind., followed with a contribution on

BIO-CHEMISTRY IN ITS RELATION TO NERVOUS DISEASES.

In this paper the somewhat peculiar and certainly novel attempt was made to establish the general theory of the causation of nervous diseases by chemic poisons, circulating in the blood and acting by a process of selective affinity upon different parts of the nervous system. The author referred to these poisons under the following groups, the classification being entirely tentative, and based upon their source of origin instead of their ultimate chemic analysis or physiologic faction: 1, bacteriologic products—ptomaines; 2, products of perverted tissue metabolism; 3, defective elimination of excretion; 4, perverted secretion of glandular organs; 5, products of imperfect digestion; 6, chemic compounds probably present in independent blood states, and of unknown origin.

Many conditions, heretofore unknown as to their etiology, will be found to be due to one of the above conditions existing in the system.

One of the most practical papers of the Section was that read by Dr. J. H. Taylor, of Indianapolis, entitled "How Shall We Rear Our Babies?" The suggestions and directions were for both physician and mother, and put in so pointed a manner that the paper ought to have a wide circulation.

The next paper was by Dr. Fenton B. Turck, of Chicago, which was entitled

DISEASES OF THE MOUTH, NOSE AND THROAT, AS ETIOLOGIC FACTORS IN CHRONIC GLANDULAR GASTRITIS, WITH BACTERIOLOGIC STUDIES OF THE PHARYNGEAL VAULT.

Bacteriologic study has developed the fact that upon the mucous membrane of the mouth, nose and pharynx, groups of microörganisms may form, which may also be found growing on the mucous membrane of the stomach, and certain germs that are found in the inflamed mouth may also be found growing on the walls of the stomach in gastritis. Under normal conditions the mucous membrane of the stomach does not favor colonization upon its walls; but let some etiologic factor come into play and microörgansms will develop. The mouth, nose and throat, when in a diseased state, become incubators ready to infect when the conditions of the stomach permit the development of growing microörganisms upon its walls. The author then referred to the bacteriologic studies of Miller, Wurtz and Lindet. Microörganisms of the mouth are carried by the food after mastication into the stomach; many of them are again recognized in the stomach, and in cases of gastritis are found in colonies growing upon the mucous walls. The author in his clinical and experimental work has presented similar groups of microörganisms taken from the gums and cavities in the teeth, as well as from the material removed by the gyromele (revolving sound) from the walls of the stomach. In cultures upon the prepared mucous membrane of the pig, he has been able to cultivate some of the microörganisms and find the same developing in the stomach that are found in the mouth. But in the control animal, he has not yet found microörganisms growing in colonies in the stomach.

After reporting several cases, Dr. Turck concluded that clinical observation indicates a marked relation between diseases of the mouth and post-nasal cavity and chronic inflammation in the stomach and intestines; that the invasion of the stomach from the infected mouth and pharynx is supported by the fact that many of the non-pathogenic microorganisms present the identical, biologic and physical forms in cases of gastritis the same as those found in diseases of the mouth and post-nasal cavities of the same patients. Dr. Turck exhibited a chart showing the predominating microorganisms found in eight cases that were studied bacteriologically.

Dr. Larrabee, of Louisville said, in the discussion, that the germ theory had been superseded by germ facts as presented.

Dr. Frank Billings, of Chicago, complimented Dr. Turck on his excellent clinical and experimental work, saying that the Doctor stands at the head of his profession in the work he has accomplished. He had shown that when there is a lowered vitality of the mucous membrane of the stomach by errors of diet, a soil is produced favorable for the development of microörganisms.

Dr. H. W. Loeb, of St. Louis, read a paper entitled

EXPERIENCES WITH PAQUIN'S ANTI-TUBERCLE SERUM IN THE TREATMENT OF LARYNGEAL TUBERCULOSIS,

in which he gave the history of nine cases of this disease, seven of which had been treated with the serum. The patients all improved greatly. One case particularly lost all dysphagia, pain in the larynx, cough and night sweats. Other patients showed a much greater improvement than under any other plan of treatment yet tried. The Doctor quoted the confirmatory evidence of Maragliano of Genoa, Cole, Semon, Wiggins and Paquin. He will continue his investigations and present further conclusions at a later date.

In the discussion, Dr. Paul Paquin, of St. Louis, explained in detail the treatment which he had instituted. He said it was just in its beginning. It will have to be improved as we go along, and it will take years to do so. The best results have been obtained in the acute forms of the disease, and not in the chronic. The law underlying serumtherapy is a natural one. It is trying to fight bacteria by using nature's remedy. He had had failures with serum, but he could mention forty or more cases of recovery. He thought that in some cases it would require other treatment beside serum. He had not had good results inside of two or three months, and it frequently required five or six months, or even longer. He had made over ten thousand injections with serum in tubercular cases, but did not recall one which was attended with fatal results. He counseled study of the climate, as well as the patient, before sending a patient away. Tuberculous patients could not live in Colorado or New Mexico. They will die quicker there than anywhere.

Dr. Victor C. Vaughan, of Ann Arbor, Mich., presented an article on "Yeast Nuclein and its Therapeutic Uses." Physiologically, nucleins form the chief chemic constituents of the living parts of cells; that constituent of the cell by virtue of which this histologic unit grows, develops and reproduces. The nuclein of various cells differs, and is limited only by the variety of cells. Chemically, the nucleins contain a large amount of phosphorus. Some are combined with albumin, forming the so-called nucleo-albumin. The nuclein molecule has a remarkable power of recuperation after partial decomposition. Some nucleins have germicidal properties. Experiments were made with animals, apparently proving that previous treatment by the nuclein gave immunity to the pneumococcus. Some thirty experiments were detailed and results given which seemed quite promising.

Dr. Hugh T. Patrick, of Chicago, read a paper on

DIAGNOSIS OF HYSTERIA.

The writer dwelt particularly upon the peculiarities of hysterical anesthesia, hyperesthesia and paralyses. The principal peculiarities of the first are its distribution in the form of a glove, sleeve, or stocking, with sharply cut border and in disseminated and irregular patches. Dr. Patrick called attention to a distinguishing trait not yet described, namely, almost instantaneous shifting of the line of demarkation between the anesthetic and normal areas. This peculiar feature applies equally well to hyperesthesia. Among the hyperesthesias was described hysterical joint disease and hysterical angina pectoris, with the differential points of diagnosis between these affections and organic disease. The peculiarities of the hysterical gait were described at some length and their relation shown to the affection described by Blocq and called by him astasia-abasia. The writer protested against this affection being considered a nosologic entity, as it is simply an exaggeration of a common feature in hysterical paralyses. The peculiarities which distinguish an hysterical from an organic paralysis of the upper extremity were also described, and hysterical affections of the special senses were briefly alluded to.

Dr. B. M. Ricketts, of Cincinnati, read a paper entitled

HEMORRHOIDS—PROLAPSE RECTUM—A NEW OPERATION.

The object of this paper was to present means more simple than had heretofore been offered for the radical cure of a prolapsed rectum and the obliteration of hemorrhoids. After widely dilating the sphincter with the fingers under

surgical anesthesia, a large semicircular needle is passed subcutaneously from the muco-cutaneous line to the upper border of the pile-bearing area, and then returned to make its exit at the point of entrance. The needle is then removed and the silk ligature made tight about the venus plexus, and the ends left hanging. These ligatures may be from one-half to an inch apart, as the case may require. It is not necessary to tie all the varices in this way, as the atrophic changes will necessarily obliterate the remaining ones. No tissue is sacrificed; the mucous membrane remains intact; there is no hemorrhage, no infection, no pain of consequence, and the loss of time is practically *nil*. The sutures are allowed to come away of their own accord. The operations made in this way for this condition have resulted in an absolute cure, and the patients have experienced but little pain during the life of the ligature.

Prolapsed rectum is treated in the same manner, except a greater number of ligatures are required. If they are properly and evenly adjusted, the atrophy of the tissues is symmetrical and the pathologic condition is relieved without stenosis.

DR. WM. PEPPER, of Philadelphia, by request, delivered the Address on Medicine. He selected for his subject "Daniel Drake: or Then and Now," which appeared in full in the JOURNAL September 14.

DR. J. HOMER COULTER, of Chicago, read this paper:

THE DEFLECTED SEPTUM AND ITS REPAIR.

The author first dwelt upon the etiology of the condition. In stenosis of any degree there is created in each inspiration, within the cavity, a more or less complete vacuum. Thus the atmospheric pressure is to that degree increased and is a constant force of no inconsiderable gravity. He holds further that such a force would be more efficient in producing structural changes in the cartilaginous septum than would a more violent force suddenly applied, because the natural cartilaginous resiliency would more easily recover and throw off the effect of the latter.

The author then gave the points in the operation, because in the observance of these lies the success of the operator. Where the deviation is well anterior, or involving merely the alæ, it is very much simplified because of convenience in operating and after-treatment as well. Until recent years but little attention was paid to the preservation of the mucous membrane, when operating on a deflected septum. A new form of punch was suggested for removing the cartilage and leaving the membrane intact.

DR. W. F. BREAKEY, of Ann Arbor, Mich., read a paper entitled "A Case of Comminuted Fracture of the Ilium with Specimen and Photographs." No reports show such an extensive fracture of the ilium as this case. It was literally shattered into pieces. The patient fell ten feet on a pile of stones, producing this fracture and also a Colles fracture with dislocation of the ulna. The patient never rallied from the shock of the accident.

DR. HAL C. WYMAN, of Detroit, presented an article on "The Treatment of Cancer." The cure of cancer is rare, and unless the treatment is begun early, the disease terminates in death. In the treatment of cancer there is still an open field. The cure by early removal, while the disease is local, is urged and practiced by all who have opportunity. But the opportunity will not occur with sufficient frequency to stamp out the disease until the people are educated as to the facts.

DR. LEWIS C. CLINE, of Indianapolis, Ind., read a paper on

LARYNGITIS FROM A RHINOLOGIC STANDPOINT.

The author adheres to Bosworth's classification of laryngitis, and applies the word *itis* only to inflammations of a purely catarrhal character, which excludes at once syphilis, tuberculosis and other constitutional diseases, as they are more properly called syphilis or tuberculosis of the larynx.

The cases that are least amenable to treatment are the atrophic, but much can be done to comfort and palliate these cases by attention to dress, stimulant and lubricant applications. For stimulating and astringing, he finds nothing equal to nitrate of silver, from 10 to 40 grains to the ounce, according to the indications. For overwork cases, the first law is rest, with occasional mild, stimulating applications with an atomizer. The great majority of cases that had come under his observation had had atrophic or hypertrophic rhinitis to a greater or less degree. Spurs and deflected septum are often associated with these conditions. The lesions most frequently observed are hypertrophies of the posterior ends of the inferior turbinate body, and a thickened, lumpy condition of the posterior end of the septum The drill, saw, snare and galvano-cautery are aids in removing these conditions in the more aggravated forms, while the application of silver and various astringents with sprays have served the author in the mild form.

DR. J. A. WESSINGER, of Ann Arbor, Mich., contributed a paper on "The Therapeutics of Oleo-Creosote and Creosote Carbonate." He summed up his experience with these remedies in the following conclusions: 1, the dosage is practically unlimited as far as toxicity is concerned, but it is preferable to begin with a small dosage, two to three drops after eating, and increase until the desired result is obtained; 2, to be of value in tuberculosis, a clinical diagnosis must be made early; 3, while these agents are distinctly germicidal, they also serve as tissue builders; 4, creosote, carbonate and oleate have the power of increasing the number of red blood corpuscles, and they also increase the percentage of hemoglobin in the blood.

DR. I. N. LOVE, of St. Louis, read a paper entitled:

THE BICYCLE FROM A MEDICAL STANDPOINT.

Bicyclists should understand the importance of going reasonably slow. The wheel brings into play all the muscles, and the maintaining of equipose has beneficial results. The matter of position is important. The rider should maintain an erect posture and not assume an unsightly stoop, in imitation of the hoop snake, which takes its tail in its mouth and sails through the country. A study of the question of the wheel for women had resulted in an opinion favorable to its moderate use in cases of acute diseases. Specialists had agreed to this. Numerous cases of long-standing pelvic diseases had been benefited by a judicious use of the bicycle. Women maintain a better position than men. An hour's wheeling three times a day is ample. The costume is important from the standpoints of health and art. He objected most emphatically to bloomers, which lessened the respect of mankind for womanhood and blemished the landscape. Leggins and accordeon-plaited skirts were about the thing. Corsets should be put aside. Skirt and shirt waist were favored, and even the sweater was approved.

The discussion was opened by DR. C. B. PARKER, of Cleveland, and continued by DR. W. N. WISHARD, of Indianapolis; DR. STERNE, of Indianapolis; DR. WALKER, of Evansville, Ind. They all advocated and advised a moderate use of the wheel for both men and women.

A paper was read by DR. T. O. SUMMERS, of St. Louis, entitled "The Physiologic Aspects of Leucocytosis," and one by DR. A. GOLDSPOHN, of Chicago, on "The Proper Indications for Repair of Pathologic Lacerations of the Cervix Uteri, and for the Relief of Pathologic Anteflexions and the Proper Operations to Meet Them."

The Nominating Committee reported as follows. The report was adopted:

President—Dr. H. O. Walker, Detroit.
First Vice-President—Dr. B. M. Ricketts, Cincinnati.
Second Vice-President—Dr. F. C. Woodburn, Indianapolis.
Secretary—Dr. H. W. Loeb, St. Louis.
Treasurer—Dr. H. N. Moyer, Chicago.
Judicial Council—Drs. W. N. Wishard, T. E. Holland, and A. P. Buchman.

The Nominating Committee also submitted the following resolutions:

Resolved, That it is the sense of this committee that the best interests of the Association will be subserved by the appointment of a permanent Executive Committee, composed of the titulary officers of the Association and the ex-Presidents, and that this committee shall conduct all the business of the Association; be it further

Resolved, That we recommend the creation of the office of assistant secretary, to be appointed by the Chairman of the Committee of Arrangements, from the place in which the meeting is held.

On motion, the Association adjourned to meet in St. Paul, Minn., on the third Tuesday of October, 1896. Dr. C. A. Wheaton, of St. Paul, was selected Chairman of the Committee of Arrangements.

Tri-State Medical Association.—The semi-annual meeting of the Tri-State Medical Association was held at Cumberland, Md., September 5, with an attendance of thirty. The following officers were elected: President, C. S. Hoffman, Keyser, W. Va.; Vice-Presidents, J. M. Spear, of Cumberland; S. H. Gulp, of Bedford; Recording Secretary, Percival Lantz, of Alaska, W. Va.; Corresponding Secretary, F. W. Fochtman, of Cumberland; Treasurer, H. W. Hodgson, of Cumberland. The next meeting will be held in Cumberland some time during next December.

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SATURDAY, SEPTEMBER 21, 1895.

PATHOGENY OF ADDISON'S DISEASE.

Among the morbid entities whose pathogeny is still obscure, the disease first described by the English clinician ADDISON, in 1855, and since known by his name is not the least interesting. Characterized by marked emaciation, asthenia, toxemic symptoms, vomiting, diarrhea, bradycardia, etc.,—and, generally, by melanoderma or bronzing of the skin, its exact causation is still unknown, but the coöperation of physiologic chemistry and clinical and experimental pathology has furnished clews which lead us to believe that the solution of the problem is near at hand.

The theories to account for the origin of the disease may be divided into three groups—the capsular, nervous and toxic. The capsular theory, which was advanced by ADDISON, accounts for the disease by the degenerative changes in the suprarenal capsules. Shortly after the appearance of ADDISON'S work, BROWN-SÉQUARD undertook a series of experimental researches which may be summed up as follows:[1] 1, the suprarenal capsules are indispensable to life, their complete ablation is rapidly followed by death, which occurs far more rapidly than from suppression of urine; 2, these organs modify and destroy a substance which can be transformed into pigment; after destruction of the capsules this substance accumulates in the blood; 3, after destruction of both capsules, the blood becomes toxic and when injected into other animals of the same species often causes death.

BROWN-SÉQUARD'S results have been confirmed by GRATIOLET, ABELOUS and LANGLOIS and denied by HARLEY, SCHIFF, TIZZONI, SEMMOLA and others. The failures of the latter investigators are probably due to lapse of sufficient time for death to occur and to faulty technique. It may take over a month for the fatal issue and, again, in animals usually selected for experiment, and especially guinea pigs, capsulectomy is very difficult. The inferior cava is in such close relation to the capsules that in order to avoid death from hemorrhage small pieces of the organ are often left *in situ*, which of course spoils the whole experiment.

The nervous theory is upheld by a number of distinguished investigators, among them ALEZIAS and ARNAUD, KAHLDEN, LANCEREAUX, BRAULT and PERRUCHET. According to this theory, the disease is due to changes in the abdominal sympathetic, and the adrenals are either not affected at all or only indirectly. ALEZIAS and ARNAUD assert that the pericapsular nerves are at fault. These are intimately connected with the capsule and it seems reasonable to suppose that any changes in them have extended from the capsule itself. As a result of their researches, they assert that whenever the cortex of the capsule, the nervous filaments or the ganglia in this part are affected, bronzing of the skin occurs. In cases where toxemic symptoms beside are found, then we have also changes in the medulla of the organ. The nerves and ganglia to which these changes are attributed are the pericapsular ganglia, the solar plexus, the right semilunar ganglion, different branches of the abdominal sympathetic and, according to KALINDERO and BOBES, even the spinal cord itself. In forty-nine cases where changes in the sympathetic are looked for, the nerves and ganglia were found perfectly normal in twelve.

The theory which accords best with the present state of our knowledge in other directions is the toxic theory. According to this view, a toxic substance is elaborated by the capsules and when they are destroyed this collects in the system and autointoxication and death follow. Among the adherents of this theory we find CHARRIN, MCMUNN, NOTHNAGEL, SCHAFER and OLIVER, FOA and PELLECARRI, MARINO-ZUCCO and others. As a result of experiments we know that double capsulectomy invariably results in death. In a winter frog this occurs in twelve or thirteen days; in summer frogs, when metabolism is more active, in forty-eight hours or more. If only one capsule is destroyed, or if any large portion of the other is left, the animal lives; but after extirpation of both capsules, life can only be prolonged for some days by inserting a fragment of capsule in the dorsal lymph sac of the frog. Blood taken from the decapsulated frog, paralyzed and dying, is toxic for other frogs recently operated on and rapidly produces paralysis and death.

PROFESSOR SCHAFER, in his recent masterly address

[1] L'Union Medicale, 1895, No. 26.

on "Internal Secretions," before the British Medical Association[2] points out that animals differ greatly in their reaction to subcutaneous injections of suprarenal capsules. The guinea pig, he states, will stand a large dose subcutaneously without showing any symptoms save, possibly, a slightly accelerated pulse. This seems to hold good for the dog and cat also, unless very large doses are used. The rabbit, on the contrary, is extremely susceptible; a large dose will kill in half an hour. SCHAFER found that intravenous injection of capsular extracts produced even more marked results. "Experiments show conclusively that the medulla of the suprarenal capsule contains a dialyzable organic principle, soluble in water and not destroyed by boiling for a short time, and which exerts a powerful physiologic action upon the muscular system in general, but especially upon the skeletal muscles, the muscular walls of the blood vessels and the muscular wall of the heart. A certain amount of action is also manifested upon some of the nerve centers in the bulb, especially the cardio-inhibitory center and, to a small extent, upon the respiratory center."

Its action on muscle is compared to different alkaloids by various writers; by OLIVER and SCHAFER to veratrin, the contraction after excitation being greatly prolonged; the blood pressure is much greater also, and the cardiac pulsations are increased. These effects pass off in a few minutes and, as this author remarks, the question is, What becomes of this active principle? The effect passes off, he states, just as quickly if the renal arteries are clamped, showing that it is not eliminated through these organs. If the aorta and cava are tied, so no blood at all circulates in the abdominal organs, it passes off almost as quickly. What, then, becomes of it? SCHAFER decides that the most probable explanation is that this active principle is stored away and gradually rendered innocuous in certain organs—a view which is corroborated by the fact that the effects on skeletal muscles are manifested for a long time after those on the heart and vessels have ceased.

A very small amount of the extract will suffice to produce marked results. Thus .0055 gr. of dried suprarenal will produce a maximum effect upon a dog of 10 kilos. Moreover, this active principle is contained only in the capsular medulla and not in the cortex. PROFESSOR SCHAFER considers it probable that this substance is continually being secreted into the blood by the capsules and though in very minute quantities may have beneficial effects on the muscular functions and especially on those of the vascular system. It appears, then, that the toxic theory offers at present the best solution of the problem and, if it prove to be the correct one, it does not seem too much to expect that serumtherapy or its allies may furnish a means of combating this insidious disease which, though perhaps not so prevalent as some others of "man's foes," has thus far remained invulnerable to the resources of our therapeutic armamentarium.

[2] British Medical Journal, Aug. 10, 1895.

THE CHOLERA.

The dispatches for the week indicate the continued progress of cholera in China, Japan and the Sandwich Islands. Cholera has appeared on the U. S. steamship *Bennington* while at Honolulu. The authorities on the Pacific coast are now fully aware of the necessity for vigilance, and no danger need be feared. The action of the Government is seen in the circular published in our "Public Service" column. The application of the same general practice of disinfection of fomites, or "suspicious" baggage, that has obtained on the Atlantic coast for the past five years will be followed by the same success that obtained there.

There seems no reason to doubt the character of the fatal cases at Grimsby in England, August 30 and September 3. The first case was that of a man who had been engaged in cleaning out the cholera ship used in 1893. Beyond a mere passing notice and some criticism of the Town Council for declaring against the notification of diarrhea, the deaths have attracted little or no attention. The fact is that England has been taught enough about cholera and its cause—thanks to the persistent pounding of MR. ERNEST HART and his colleagues—not to get hysterical at its mere mention. The disease is no longer a bugbear, but a blessing in disguise, enforcing the lesson of an uncontaminated water supply and general cleanliness. The latest contribution to this lesson is furnished from Bombay. Prior to 1892 whenever a high death rate from general causes prevailed, an outbreak of cholera accompanied or followed. Since 1892, however, although the general death rate has been very high, there have been few cases of cholera. This is ascribed to the pure and plentiful water supply introduced in the year mentioned and to the general measures of cleanliness and sanitation since enforced. Moral, *re cholera Asiatica:* Don't defile the water you drink, nor the air you breathe, nor the soil you live on; so shall the Indian pestilence pass you by unharmful.

We observe with some surprise that persons who should know better, have been vigorously denouncing "quarantines" in the columns of the daily press. It would be unfortunate for the country if such views should prevail. "Quarantine" as understood and practiced in the civilized world to-day means simply *inspection* and *disinfection*, *hospitals* for the *sick*, and *cleanliness* for the *ship*. It is simply quarreling with an obsolete method, long since extinct, to oppose quarantines. The day of detention quarantines *per*

se passed in this country, when the Government took command of the quarantine service as a permanent charge in 1888, on the recommendation of SURGEON-GENERAL HAMILTON and these quarantines have since been perfected on the lines then laid down, and for which a half a million was appropriated by the act of Aug. 1, 1888. Subsequent acts, establishing supervision over the ship from its point of departure, and a more rigid inspection of immigration, have greatly improved the situation.

An amusing statement is attributed to a leading hygienist, that if all the cholera germs in the world were dumped into Lake Michigan, Chicago would be in no danger. This must be erroneous for the whole world knows cholera to be waterborne. The Indian "tanks," the wells and the water supply have been the chief sources of propagation, from time immemorial. *The bacillus lives in water, and dies when it is thoroughly dried.*—That is the lesson taught by bacteriology, and a study of epidemiology.

There is no longer any use to appeal to local self-glorification by making statements directly contrary to the known truths of science. No American public should dread or fear the truth. It is concealment that is misleading and disastrous.

We doubt not that the medical officers of the Navy will be able to arrest the spread of the disease on the *Bennington*, so that when it returns to the Mare Island Navy Yard the disastrous history of the French troop ship, at Toulon, from Tonquin, may not be repeated. And we have equal faith that the Marine-Hospital Service will stamp out the disease now at Angel Island Quarantine, if the local authorities do not obstruct matters by foolish interference. It is not San Francisco but the whole country that is interested in this matter.

The only question now is the sanitary condition of "Chinatown," and that question is being settled by a house-to-house inspection of that celestial spot, by the health authorities of San Francisco. In the meantime, there is every reason, on many accounts, why all the interior cities should put themselves in good sanitary condition.

VACCINATION OF SCHOOL CHILDREN.

One by one, the courts of the different States are settling the question of the legality of compulsory vaccination of school children. Feb. 11, 1895, the general term of the Supreme Court of New York, affirmed, in re Smith, a decision holding constitutional, Section 200 of the Public Health Law of that State which provides that no child or person not vaccinated shall be admitted or received into any of the public schools of the State. And only recently has been made accessible, the decision of the Supreme Court of Errors of Connecticut in the case of Bissell v. Davison, rendered Dec. 1, 1894, of much the same purport. In the latter case, the court holds that a statute providing that the board of school visitors of any town may require that every child shall be vaccinated before being permitted to attend the public schools, is valid, and there is no reason for implying that the power is only to be exercised when an epidemic of smallpox is reasonably to be apprehended. It does not deprive a child of his rights, without due process of law, or deny to him the equal protection of the laws, guaranteed by the Federal and State constitutions. The duty of providing for the education of the children within its limits, through the support and maintenance of public schools, is to be considered in the light of a governmental duty resting upon the sovereign State. In the performance of this duty, the State maintains and supports, at great expense, and with an ever-watchful solicitude, public schools, and secures to its youth the privilege of attendance therein. This is a privilege, rather than a right, in the technical sense of the term. This privilege is granted, and is to be enjoyed, upon such terms and under such reasonable conditions and restrictions as the law-making power, within constitutional limits, may see fit to impose; and, within those limits, the question what terms, conditions, and restrictions will best subserve the end sought in the establishment and maintenance of the schools is a question solely for the Legislature, and not for the courts. Such a statute as that under consideration is essentially a police regulation,—as much so as would be one giving the power to exclude, temporarily, scholars afflicted with infectious or contagious diseases, or coming from homes or districts where such diseases are prevalent. It is a reasonable exercise of the power to require vaccination, if such requirement can ever in the nature of things, be a reasonable one. Support for these propositions is also found in precedents established in California and Pennsylvania.

THE IMMEDIATE EFFECTS OF INJURIES OF THE BRAIN.

An interesting medico-legal point brought out in a recent murder trial, in regard to which there seems to be a lack of definite and positive statement in the text-books, is the question as to the immediate results on consciousness and motility, of gunshot wounds of the brain. A woman was shot with a pistol while in bed, and it is said she rose, spoke to her husband, and made her way to a rear porch. The prosecution claimed, and brought medical testimony to support its claim, that with such a wound she could not have walked or talked as she was said to have done. The details in the newspaper accounts as to the wound are not very exact, but it seems to have been high up in the brain; at first it was stated in the notes as one-half inch above the crus cerebri,

but this was corrected to corpus collosum. The ball passed through both hemispheres from right to left; the woman was unconscious when found and remained so until her death, sixteen hours later.

These rather vague particulars taken from the daily press furnish no sufficient data on which to decide this particular case, but they suggest very strongly the question whether any one can say just what will be the immediate effect of a small projectile wound of any portion of the brain above the medulla. Destruction of the pyramidal fibers could follow a wound as high as the internal capsule, but above that, many of them would undoubtedly escape, and there are numerous instances of gunshot and other wounds apparently in a situation to involve parts of the motor region that have not been directly followed by any general or even extensive paralysis. When it comes to the question of consciousness there are still more difficulties, and it is hard to say what injuries inevitably destroy it completely and at once. All we know is that the tolerance of injury by the brain is very great, that its limits have not been defined with even any approximate accuracy, and that therefore any positive statements as to just what will or will not occur are hardly justifiable in the present state of our knowledge. The most one can safely say is what is possible, hardly what is probable, and it would be well if our text-books on medical jurisprudence which are generally looked upon as authorities in this matter, stated more definitely than some of them do, the fact of the limitations of our knowledge in regard to this particular point.

THE RADICAL CURE OF HERNIA.

The operation for the radical cure of hernia has received the official approval of the War Department. From twenty to thirty men are discharged every year from our Army on account of rupture. These men become valueless as soldiers and under present laws are each entitled to a pension of $8 per month and to a suitable truss renewed every three years. As most of the ruptured soldiers are young men with a long expectancy of life, the disability is a costly one to the Government. It remains to be seen whether the radical operation will save the injured soldiers for further military service and by so doing reduce the list of ruptured pensioners; and also whether the victims of rupture will take advantage of the opportunity afforded them of being treated for a radical cure. According to a recent circular from the office of the ADJUTANT GENERAL of the Army, cases of hernia suitable for an operation should receive surgical treatment, which, by the most approved modern methods, is successful in a large proportion of the cases operated on, and in skillful hands is attended with little risk. Operations for the radical cure of hernia will be performed, with the consent of the soldier, by medical officers specially designated by the SURGEON GENERAL of the Army.

Medical officers will report cases of hernia considered favorable for operation to the SURGEON GENERAL. If the case is considered unsuitable for operation, or if an operation is declined by the soldier, the fact will be noted on the certificate of disability.

LESS THAN A CENT A VISIT.

Some of the cheapest styles of medical practice that can be found anywhere in the world, can be found on the "east side" of New York city. But that which cheapens the business to its minimum is a new kind of coöperative scheme of medication, on the plan of an insurance association. A writer to the New York *Herald* calls attention to some of the features of this scheme. He says:

"Nearly every head of a family, in this eastern section of the city, belongs to a secret benefit society of some sort. Until lately these societies confined their activity to life insurance, funeral benefits and sick benefits, but lately the feature of medical insurance has been added to several of them.

"The plan is to engage some young physician who for a fee of 75 cents per quarter from each member of the society undertakes to attend the member or his family in case of sickness. At first sight it seems as if this might be a profitable arrangement in the case of a society with one thousand or more members but in practice it is not so. Every member of the society has several children, one or more of whom are almost constantly ailing, and the slightest ailment furnishes an excuse to call the doctor when his visit costs nothing extra.

"One young physician who rashly entered into contracts with three of these societies, having an aggregate membership of 1,500, told me that he estimated that he got three-quarters of a cent for each call he made.

"'I can find no time for private practice,' he said. 'To-day I have had forty-two calls from my society patients, and I have an average of thirty a day. I am all worn, out with the work, and when my quarter runs out nothing will induce me to renew the contract.

"'Why, if a child scratches its finger I have to go and dress it, and I have even found cases where the society members called on me to visit their neighbors, passing them off as members of their own family and charging them a small fee for the accommodation.'"

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

The program for the eighth annual meeting of the American Association of Obstetricians and Gynecologists has just been issued. The daily sessions will be held in the south parlor of the Auditorium Hotel, Chicago, Tuesday, Wednesday and Thursday, September 24, 25 and 26. The President is DR. J. HENRY CARSTENS, of Detroit; the Secretary, DR. WM. WARREN POTTER, of Buffalo.

The work of this Association has attracted a great

al of attention, its papers and discussions being iversally quoted. It enjoys the reputation of ing one of the most scientific and active organizaons in this country. The papers represent advanced ought in both gynecology and obstetrics. At its eetings the results of original research are reported. he discussions are free and spirited, as might be pected, when they are participated in by such men Joseph Price, Joseph Eastman, L. S. McMurtry, A. L. Reed, A. Vander Veer, W. E. B. Davis, obert T. Morris, James F. W. Ross, H. W. Longear, J. D. Griffith, and others equally prominent. The Association is called to order promptly on me at every session; the members are not restricted time in debate, and there is a notable absence of he "mutual admiration" element in the discussions. The profession are cordially invited to attend the eeting by the Chairman of the Committee of rrangements, Dr. J. B. Murphy.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

This Association which now includes in its membership representatives from the whole of North merica, will this year meet in Denver, Colo., October 1, 2, 3 and 4. The Local Committee of Arrangements, of which Dr. Henry Sewall is chairman, and fty-three other doctors, two United States Senators, he Mayor, the Governor, the Chief Justice of the tate, six Judges, four ex-Governors, a member of ongress, forty-four other prominent citizens and the adies' Reception Committee, are the other members, ave prepared a very handsome program. The illumiated cover and well executed illustrations are works f art. One can scarcely glance at this elaborate etting forth of the beauties of Colorado, without a esire to attend the meeting, participate in its exerises and see the glorious scenery for which Colorado s famous.

The usual reduction of railway fares has been romised.

CORRESPONDENCE.

Is the Journal Too Good?

Marienville, Pa., July 29, 1895.

To the Editor:—The more one sees of The Journal (big apitals in *The*, please,) the more satisfaction there is in seeng it all, from title page to finis, of the highest order. The profession ought to be proud of it. Personally, I am willing o add 50 per cent. to the annual dues, if necessary, to keep t up to the highest point in medical journalism.

* * * * * *

There is a point, however, worth noting. In a conversation with Trustee Dr. E. E. Montgomery, at the Philadelphia meeting, I said the only criticism I heard now about the Journal was that "it was too good." There is more than "something" in that. The Journal wants a big circulation. It can't reach all classes—and there are classes and classes in the profession—by a series of articles that are so good as to be exclusive to all but well posted M.D.'s. The editor, of course, desires to be a lift and help to all that come within range. In this view, it is worth while considering if a column or two could not be set aside for notes, queries and brief articles on treatment exclusively. This or some other way that will bring the Journal in touch with all classes, or as one might put it, the mass of the profession. However, as things are going now, the man who has a bound volume of the Journal at the end of this year, will have a fund of information that he can't get in any $7 to $10 "Practice" on the market, to say nothing of surgery, etc. "Here's to you!" "*Palmam qui meruit ferat.*" Very truly yours,

S. S. Towler, M.D.

A Way to Increase the Membership.

Huntingdon, Pa., Sept. 16, 1895.

To the Editor:—Will you please send to my address about twenty-five blank applications for membership in the American Medical Association?

It seems to me, if some member, treasurer or secretary of each county medical society would distribute to each member of their society a blank application for membership in the American Medical Association, telling them also that in connection with their certificate of membership they would receive a weekly journal of medicine which is second to none in the United States, that there would be a larger ingathering of membership to the Association. It is for this purpose that I desire the blanks, and if you have any surplus copies of the Journal I think I could use them to good advantage. Yours respectfully, G. G. Harman, M.D.

We have printed the foregoing letter, although it was not intended for publication, as it contains a valuable suggestion for secretaries of societies who desire to help enroll American physicians in the membership of the Great Association.

Not in the Chromo Business.

Springfield, Ill., Sept. 9, 1895.

To the Editor:—I am in receipt of an offer, from a New York firm of medical publishers, which seems to me a stroke of enterprise that you might emulate. They will send me their journal (a weekly like our own) four months free, together with a copy of a standard medical work, price $5, and will give unlimited credit if I become a subscriber to the aforesaid journal.

Now, will you tell me what earthly show *our* Journal stands in competition with this kind of push?

As one of the stockholders of the Journal of the American Medical Association I feel that I have a right to protest against your old-fogy methods. You are too conservative and dignified. Haven't you got a chromo concealed somewhere about the premises that you might offer for a new subscriber? Or why not give a bicycle and the Journal free for a year to any one who will take it out of the postoffice?

Possibly you think the Journal worth its subscription price, and undoubtedly it is. But if we are to give it a circulation commensurate with its value we, the present subscribers who are its owners, must do something to counteract these efforts of the medical book publishers to monopolize the periodical field.

If you will send me one or two sample copies each week for a month or so, I will see what I can do among the profession here. And if each of us will do the same, I think we can offset the gift enterprise business pretty effectually.

Yours for our own Journal, F. W. R.

BOOK NOTICES.

Examination of Water for Sanitary and Technic Purposes. By Henry Leffmann, A.M., M.D., Ph.D. Philadelphia: P. Blakiston, Son & Company. Third Edition. 1895.

Dr. Beam, who was associated with Dr. Leffmann in the publication of the earlier editions, is now permanently residing in

a distant land and has severed his connection with the work and turned over his copyright privileges to his former associate. The new edition contains little that is not in the second edition. The spelling of certain words has been changed, so that we now have chlorin, chlorid, technic, analytic, etc. From the table of contents we would infer that there was a considerable alteration in the text, but on examination we find merely a rearrangement of the matter. A few paragraphs have been added under the heading of Biologic Examinations and their Interpretation. For instance, citation is made of Vaughan's culture of the bacteria of water at 38 degrees C., to exclude all growths except those that flourish at the body temperature. The Franklands are cited on the differentiation of the typhoid bacillus, and several methods are briefly stated from the works of various experimenters for the detection of the spirillum of cholera. The sand filters at Lawrence, Mass., are described. The author, however, is not accurate in all of his statements, as, for instance, on page 103, where he appears to consider that the object of the convention of bacteriologists lately held in New York city was merely to secure a consensus of opinion among bacteriologists as to the most satisfactory method of microbe counting. However, the book has its uses, and with exceptions noted is of considerable value.

The Diseases of Personality. By TH. RIBOT, Professor of Comparative and Experimental Psychology in the College of France. Authorized translation, second revised edition. Pp. 163. Chicago: The Open Court Publishing Company. Price, cloth, 75c; paper, 25c. 1895.

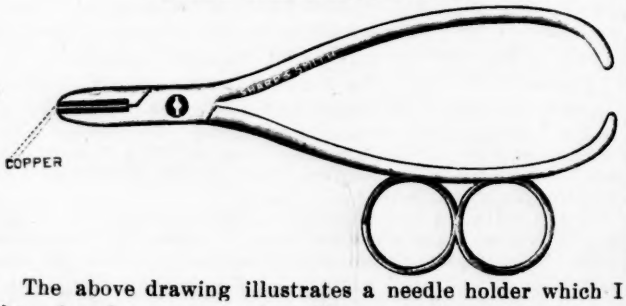
This book is one of a series of psychologic phantasies which have been published from time by the Open Court Company. Professor Ribot first published his studies of the diseases of personality in Paris, 1884. The fact that the book passed through four editions gives ample proof of its value to psychologists.

The work is divided into four chapters devoted to Organic Disorders, Affective Disorders, Disorders of the Intellect, Dissolution of Personality, respectively.

The author gives a number of observations of cases of spontaneous alterations of the "Ego," which he thinks to be a more rational basis for the study of the morbid manifestations of personality. His deductions from a psychologic standpoint are clear, logical and concise, and will be read with profit by those interested in this branch of science, and familiar with its peculiar phraseology.

NEW INSTRUMENTS.

A NEW NEEDLE HOLDER.



The above drawing illustrates a needle holder which I have found more convenient than any other which I have heretofore used. The handle is of such size and shape that it can be firmly grasped by the hand. The two rings on the lower half of the handle are for the tips of the middle and third fingers, and the instrument is easily opened by grasping the upper half of the handle between the bases of the thumb and index finger and simply opening the hand. Two pieces of copper are set between the jaws, insuring the needle against slipping.

In getting rid of the spring and lock, we are rid of pa which often annoy by getting out of order and retard work. The grooved steel jaw is also often troublesome breaking needles or tilting them in the wrong direct when they are firmly grasped. I believe that much m rapid work can be done with this instrument than with a other with which I am acquainted.

The figure is one-half the exact size of the holder, a was made for me by Sharp & Smith of Chicago.

JNO. MADDEN, M.D.
63 and 64 Sentinel Building, Milwaukee, Wis.

PUBLIC HEALTH.

In Honor of Jenner.—In order to fitly commemorate t centenary of vaccination, which will occur in May, 1896, t National Health Society of Russia is organizing an am tious program. It proposes to offer four prizes for the b works on vaccination; to collect and furnish materials fo history of the practice in Russia and Western Europe; publish a Russian translation of Jenner's works, with biography and portrait; to give an exhibition of objec connected with vaccination and to hold a commemorati meeting on the day of the centenary, May 12. Dr. Vladim Hubert will edit the history of the great discovery.

Oleomargarine and Natural Butter.—In order to determi the relative digestibility of oleomargarine and natural bu ter, Dr. Adolph Jolles (*Sitzbericht: Kaiseri, Academie in Wi* 6th Marz, 1894) has carried out a long series of observati on dogs fed during four consecutive periods with natur butter and with margarine. All other things being equal, was found that from 97 to 98 per cent. of the fatty matt was uniformly digested, whether it was butter or margari which was used. During the first and third period, whi butter was given, 98.4 and 97.1 per cent; during the seco and fourth, while margarine was used, 97.9 and 97.3 per ce of the fatty matter given was digested. It thus appeared this experiment, where proper care was taken to have the conditions similar, that natural butter and manufa tured margarine had practically identical coefficients digestibility and nutritive value.[1]

Lofty Stature versus Long Life.—A writer in the *Nation Popular Review* has been investigating the age period at dea of those abnormally tall individuals who are classed "giants," and believes he has found that all who measur over six and one-half feet have been short in their life's spu He is of opinion that there is sure to be some failing link i the physiologic chain of these abnormal beings; and thi too, independently of any of those moral inadequacies whic too often exist and help to precipitate an early downfall breakdown. He further says:

"As a rule, giants are not long lived. They have too man gauntlets to run. Being giants—that being anything ove six feet six—they naturally drift into the show business an are thenceforth incarcerated in vans, close rooms and in th dingy and effluvia-laden air of the exhibition room. Thei not over-resisting lungs here inhale the combined effluvi and aroma that arises from the lungs, skin and not over clean or over-well aired clothes of their many admirers, a of which is not conducive to either health or to long life. It would seem reasonable to believe that a giant—be he seven or ten feet tall—who is well formed, and who has every organ in a just proportion to his bulk, should live as long a a small man or as long as his heredity might otherwise per mit. Reasoning theoretically, this would seem probable but when we come to analyze the subject and compare the actual facts we find that something or other always goes wrong, and, owing to many an "if," we find that our giant dies early, as a rule. Some one organ goes wrong, and the great machine comes to a stop, or some organ does not keep pace with the rest of the increase in bulk, and he goes

[1] Boston Medical and Surgical Journal, Sept. 12, 1895.

halting and squeaky, or either an overwork or an underwork here or there, and a physiologic inadequacy, of some sort is the result, with a general deterioration of the whole structure and a finally premature death."

Medicine and Hygiene at Bordeaux.—Marcel Baudouin is not at all enthusiastic over the medical exhibit in the Exposition at Bordeaux. He says in *Le Progres Medical*, he finds there only odd bits touching upon the science of medicine and hygiene and complains that the exhibit is not complete and has no definite lodging place. There are indeed, says he, under those pavilions, in the midst of the endless rows of chairs and flower beds, in those elegant palaces, striking copies, by the way, of the colossal buildings at Chicago, many surgical instruments, sanitary appliances, mountains of bottles of mineral waters, etc. And, here and there, one comes upon some show cases that interest the physician, some pictures or instruments which attract the eye of the hygienist. He refers to two reminders of the Chicago Exposition: the optometer of Dr. Clark and the Leblanc stoves, and that the exhibit of cold storage rooms for the preservation of meats, milk and other foods, is an interesting feature to scientists. The one exhibit which aroused the writer's real enthusiasm is the emergency hospital station installed in the Exposition by the Society of Ambulances of Bordeaux. Alongside of this hospital is the pavilion in which the society exhibits its apparatus and the plans of its principal stations. There is also the two-wheeled litter exhibited by this same Bordeaux society, very well built, and extremely light." This is the first wheel litter ever seen in France with pneumatic tires.

Medical Climatology of Brazil.—Rio Janeiro, the capital of Brazil, with 600,000 inhabitants, is bathed by the sea on the southeast, east and north. It is in a valley between spurs of the coast range, of which Corcovado, 800 meters, is the highest point, and the city extends upward on these slopes to a height of 750 meters. The subsoil is humid and saturated with organic matters. Dr. Fives, of Almeida, believes this has a great deal to do with the prevalence of yellow fever and all the zymotic diseases. Yellow fever is endemic in many Brazilian cities and Rio Janeiro pays a yearly tribute. This disease frequently assumes an epidemic character, when its proportions are alarming. Nevertheless, the mortality figures for 1893 are lower than those of the years immediately preceding. Next to el vomito, beri-beri and tuberculosis are potent factors in the death rate, as also all pulmonary affections, on account of the constant humidity of the soil. The following table gives an idea of the climatic conditions of the city:

	Mean Barometer.	Thermometer in the shade.	Difference bet. Maxima and Minima Thermometers.
January	754 mm. 72	26.1°	14.0°
April	758 " 21	23.0°	9.4°
July	762 " 82	19.2°	29.3°
October	756 " 71	21.2°	13.8°

A sample of the number of rainy days and quantity of rain is afforded by the following:

1886	149 rainy days	12 mm. .87 of rain.
1887	154 rainy days	13 mm. .15 of rain.
1888	169 rainy days	13 mm. .99 of rain.

In July, 1892, Drs. Francisco de Doncher, Luis Laureys and Guimaraez Bouzeau made a report to the National Congress, in which they stated the causes of the insalubrity of Rio were due to: 1, corruption of the soil; 2, insufficient water; 3, defective system of the "City Improvement Company"; 4, existence of the Manque canal in communication with the two large lagoons, which constantly communicate with the sea; 5, defective hygiene in certain private establishments. They recommended thorough drainage of the subsoil as the first step to be taken. Porto Alegre has 50,000 inhabitants, 8,000 to 10,000 of whom are foreigners. Morbidity and mortality are very high in this city; also tuberculosis, typhoid fever and gastro-enteritis. Paludism is as common as in Rio Bahia. This town is noted for the large number of aneurysms. During the twenty years from 1870 to 1890, out of 53,188 patients, 90 had aortic aneurysms, and 36, aneurysms of other arteries. Dr. Britto attributes this prevalence to mountain climbing and too elaborate diet.[1]

[1] Journal d'Hygiene, 1895, No. 982.

Systematic Inspection of Canned Food Supplies.—The *Sanitary Record*, for July 26, devotes a leading article to the imperfections of legislation in Great Britain in the matter of a thoroughly organized system of inspection of food. It makes no scruple in saying that the existing laws fall ridiculously short of the requirements of the case, and that the officers responsible for the detection and prevention of adulteration are greatly hampered. The laws, it avers, seem to have been so drawn up as to protect the adulterator, and even to shield those who must know that they are engaged in the sale of foods that are unfit for human consumption. In the following paragraph, allusion is made to the defective supervision had over canned goods, a portion of which, at least, is derived from this country:

"There is positively little safeguard as regards the sale of meat and fish in tins. Yet probably the greater number of cases of poisoning from the eating of unwholesome viands are due to tinned foods. Unfortunately, there exist a number of firms in the United States and in South America who pack enormous quantities of meat and fish without taking the necessary precautions. Often the cattle or fish are in a diseased state, the cleaning and cooking is carried out in a careless way and the packing in tins is scamped. The consequence is that air sometimes gets into the tins, decomposition sets in, and the persons who consume the contents run serious risks of alkaloidal poisoning. Even tinned milk of inferior brands is frequently found to be in shockingly unwholesome condition. Of the adulteration of tinned and bottled comestibles with borax and other 'preservatives,' and of copperas and other coloring matters, we need not write on this occasion. But it is evident enough that the law as regards inspection of foods, the control of preparation and sale of viands, requires revision and strengthening, and, above all, of simplification. The practical sanitarian always feels angry when he reads that a coroner's jury has returned a verdict of accidental death, when some one has fallen a victim to the eating of unwholesome food, for he knows well enough that such deaths would become almost impossible were proper and thorough inspection feasible."

The writer of the article looks forward to the time when this subject will be adequately dealt with, and this will be when the legislators of the United Kingdom devote their energies to "really useful work."

Health Reports.—The following health reports have been received at the office of the Supervising Surgeon-General Marine-Hospital Service:

SMALLPOX—UNITED STATES.

Illinois: Chicago, August 1 to 31, 7 deaths.
Louisiana: New Orleans, September 1 to 7, 8 cases.
Michigan: Battle Creek, Bedford Twp., Charleston Twp., Detroit, smallpox reported present September 1 to 7.
Ohio: Dayton, September 13, 1 case.
Texas: Eagle Pass, September 9 to 15, 1 case.
West Virginia: Wheeling, September 13, 20 cases.

SMALLPOX—FOREIGN.

Batoum: August 20 to 27, 1 case.
Cairo: August 6, to 12, 2 deaths.
Constantinople: June 1 to 30, 39 deaths.
Dublin: August 24 to 31, 3 cases.
Havana: August 29 to September 5, 2 deaths.
London, Eng., August 24 to 31, 4 deaths.
Prague: August 17 to 24, 1 case.
St. Petersburg; August 10 to 24, 3 cases.
Trieste: August 17 to 24, 2 cases.
Tuxpan: August 24 to 31, 7 deaths.
Rio de Janeiro: August 10 to 17, 67 deaths.

CHOLERA—FOREIGN.

Hawaiian Islands: Honolulu, September 5, 39 cases, 32 deaths.
Japan: Osaka, July 19 to August 1, 1076 cases, 717 deaths; Hiogo, July 19 to August 1, 246 cases, 193 deaths; August 10 to 17, 287 cases, 237 deaths.
France: Paris, August 11 to 17, 8 cases.
India: Madras, August 3 to 9, 4 deaths; Calcutta, July 27 to August 3, 11 deaths; Bombay, August 6 to 13, 4 deaths: Singapore, June 1 to 30, 80 deaths; July 22 to 29, 38 cases, 31 deaths.
Morocco: Tangier, September 11, cholera reported.

Russia; Volhynia, July 21 to August 3, 688 cases, 238 deaths.

Turkey: Constantinople, August 8, 1 case, 1 death.

Turkey in Asia: Aleppo, July 28 to August 12, 264 cases, 93 deaths; Konia, (vilayet) July 21 to August 12, 32 cases, 16 deaths; Adana, (vilayet) July 23 to August 10, 105 cases, 49 deaths; Aleppo, (vilayet) July 24 to August 12, 98 cases, 57 deaths; Diabekir, August 5 to 12, 83 cases, 66 deaths; Hisnei-Mansur, July 28 to August 10, 87 cases, 69 deaths; Homs, August 9, 1 case, 1 death; Hudavendkjar, (vilayet) July 29 to August 12, 24 cases, 22 deaths.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, August 10 to 17, 8 deaths.

Mexico: Vera Cruz, August 22 to September 5, 2 deaths.

Puerto Rico: San Juan, August 24 to 31, 1 case, 2 deaths.

Cuba: Cienfuegos, September 1 to 8, 4 cases, 2 deaths; Havana, August 29 to September 5, 80 cases, 26 deaths.

NECROLOGY.

VAN BUREN HUBBARD, M.D., surgeon and major, U. S. A., is reported by telegram, dated September 9, to have died at Fort McPherson, Ga., at which post he has been serving as post surgeon. The cause of his death is reported in the telegraphic notice as an illness of several weeks from an old trouble. The regulation military funeral was held September 8, and the body, under the escort of his brother, Dr. George C. Hubbard, was taken to Staten Island for burial. Major Hubbard was appointed to the Army from civil life and was breveted during the war for meritorious services. He was from Ohio.

FELIX WEIDMAN, M.D., of Albany, N. Y., September 10, aged 70. He was graduated from the Albany Medical College in 1847.——F. B. Haller, M.D., of Vandalia. Ill., September 14, aged 69. He was an honored member of the Illinois State Medical Society.——J. T. Strong, M.D., of Plainfield, Ind., September 10, aged 55. He was graduated from the University of Michigan and served with credit during the war.——Newton Herrick Ballou, M.D., of Lansingburg, N. Y. September 9. He was born in Sheldon, Vt., in 1816, was graduated from the Jefferson Medical College of Philadelphia in 1839. He served through the war as surgeon of the 2d Regiment, Vermont Volunteers. He had practiced medicine nearly fifty years, having spent twenty-five years in St. Albans, twenty years in Burlington, and a few years in Lansingburgh.——James Ash, M.D., of Philadelphia, September 2, aged 67. He was descended from a family which lived in this country before the Revolution, and was graduated from the Medical School of the University of Pennsylvania about fifty years ago. He practiced medicine in Germantown, Pa., until the beginning of the Civil War, when he entered the service of his country as surgeon of the 1st Excelsior Brigade of New York, retaining that position until the end of the war. He was a member of the Philadelphia County Medical Society, the Sons of the Revolution, etc.——Edward S. Donaldson, M.D., of Waupaca, Wis., September 2, aged 51.——W. P. Burts, M.D., of Ft. Worth, Texas, September 5, aged 68.——Willard Wright, M.D., of Atlantic City, N. J., September 8, aged 63. He was born in New York, and was graduated from the University of Pennsylvania. He went to Atlantic City in 1872 and took an active part in the Greeley campaign. He was elected mayor of Atlantic City five times and was appointed postmaster by President Cleveland during the latter's first term.——Charles S. Beck, M.D., of West Superior, Wis., September 4, aged 35.——V. C. McClure, M.D., of Chicago, September 16, aged 80.——George Spees, M.D., of Milwaukee, Wis., September 13, aged 62.

MISCELLANY.

Denver, Colo., Medical College.—The opening exercises of this college were held September 11.

Petroleum in Military Hospital Laundries.—According to *Public Health*, August, in one of the military hospitals of Germany, petroleum is used in washing the linen, as commonly employed in certain districts of Russia. One gram is added to each litre of soapy water. The cleansing is said to be more easily effected, and the linen is less spoiled and becomes whiter, while the expense is less, owing to a saving in soap. The method is to be tried in other German military hospitals.

A Case to go to the Jury.—The general term of the Supreme Court of New York decided June 21, 1895, in the case of Comstock v. Green, that there was evidence to go to the jury. This was an action brought to recover for the professional services of the plaintiff, as a physician, rendered to the wife of the defendant, which were necessary for her health and comfort. The evidence in question tended to prove: 1, that the defendant's negligence and ill treatment of his wife while she was ill was such as to justify her in going away with her daughter, where she could be cared for and protected; 2, that she did go away, with the consent and approval of the defendant; 3, that she needed the medical attendance and services of the plaintiff for which the bill was rendered. Further than this, the court indicates no opinion; but, in holding as it does, it reverses the Allegheny county court.

Medical Women in America.—Commenting on the interesting address of Dr. Frances Emily White, professor of physiology in the Woman's Medical College of Pennsylvania on "The American Medical Woman," Dr. Malcolm Morris, editor of the *Practitioner*, is moved to remark that, of the leading women in the medical profession whose portraits and biographical sketches are being published in the *Woman's Medical Journal*, "there is not one whose name has," so far as he is aware, "crossed the Atlantic." This omission bids fair to be remedied before Dr. Forbes Winslow's return to Albion. Judging from the newspaper accounts the English alienist has succeeded in arousing the medical woman in America to a volubility and vehemence sufficient to carry her name across two Atlantics.

A Question of Heredity.—A writer in the New York *World* calls attention to the fact that family reunions—save those possibly of the Smith family—have few delegates bearing the true family name. His explanation of the circumstance may be judged from the following paragraph:

"A recent reunion of the Stone family held at Milford, Conn., was remarkable for its resemblance to all other family reunions in one important respect. This was that the majority of the representatives of the honored ancestor bore some other name. In other words, there were more descendants through female lines than through an exclusive male line. This of course is a mathematical certainty. In ten generations a single female descendant changes the name permanently, whereas it requires an uninterrupted succession of ten generations of male descendants to maintain the name unchanged. But this is not the main point. The main point is this: if the female ancestry as well as the male ancestry is recognized, which is only common sense, then a family reunion ought to recognize not merely all the descendants but all the ancestors as well. This country is going into the business of ancestor worship now on a scale not exceeded by China. When we get to worshiping ancestors it is just as well to bear in mind how many ancestors we have. They are many."

Photography in Colors.—At the recent Springfield, Mass., meeting of the American Association for the Advancement of Science, reference was made by Prof. W. L. Stevens to the progress that is being made in color-photographs. He expressed the opinion that the best method had been devised by F. E. Ives, of Philadelphia, who had made a camera which took three negatives at once, each sensitive to one of the three primary colors which, combined make our sensations of color. Prints on glass from these three negatives could be looked at in a special box in such a way as to reproduce in a wonderfully faithful manner all the original colors of an object or group of objects. Within a few months, however,

Mr. Ives, by means of three suitably dyed gelatine prints placed one over the other between plates of glass, has been able to produce a photograph which gives to the eye the natural colors of an object or landscape when hung as a transparency in the window or before a light without any special apparatus.

Physicians Alone to Report Births and Deaths.—Section 2609 of Vol. I of Hill's Annotated Statutes and Codes of the State of Washington, requiring physicians, accoucheurs and midwives to register their names and post-office address with the county auditor of the county where they reside, and requiring them to report, under penalty of $10, to the county auditor all births and deaths which may come under their supervision, with a certificate of the cause of death and such correlative facts as the board of health may require, has been amended so as to omit all reference to accoucheurs and midwives; requiring the reports to be made on or before the 15th of every month, instead of within thirty days from date of their occurrence; and making the penalty recoverable at the suit of any member of any State or local board of health, instead of at the suit of the county auditor.

Diabetes as a Complication in Surgery.—Leon Legendre, in his inaugural thesis—These de Paris, 1895—rehearses the gravity of operations undertaken with diabetic patients. All suppuration in these subjects tends to assume a gangrenous form. Systematic abstention from operating seems to constitute as great a fault as too frequent surgical intervention; the just course seems to lie between these two extremes. Before performing any operation it is necessary to learn what form of diabetes is present. The "lean" form—cachectic, pancreatic—does not seem capable of disassociation; with "fat" diabetics, on the contrary, it is probable that three divisions may be established: nervous persons, who have become diabetic by reason of a moral or physical shock, and who manifest all the classical signs of a pancreatic lesion. Next, the cases in which the glycosuria is not strongly marked and is discovered by accident, so to speak; these maintain a good nutrition for a long time—their symptoms are obscure—their personal and family histories are characteristic of arthritism. Lastly, the atheromatous form of Reynier, characterized by small amount of sugar, the condition in general remaining good for a long time, with an anatomic basis consisting of atheromatous lesions in the bulbar arteries. Hence, when a diabetic patient is to be operated on it is of the greatest importance—1, to seek the origin of the diabetes; 2, to analyze the urine; 3, to ascertain the state of the reflexes. Bouchard has shown the relation between the gravity of the diabetes and the disappearance of the patellar reflexes. As regards surgical interference in diabetic patients, the following conclusions are formulated: 1, no operation of expediency should ever be performed; 2, necessity alone should force the surgeon to operative measures; 3, asepsis is more essential than antisepsis in these cases, since antiseptic agents are, as a rule, badly borne by them.

Results of Operations for Cancer of the Breast.—Messrs. Jones and Platt, surgeon and resident surgical officer respectively, publish the results of all the cases of carcinoma of the breast, 55 in number, operated on by Mr. Jones in the Manchester Royal Infirmary during the ten years 1883–1892 inclusive. The ultimate results so far as learned were—deaths soon after operation 2; patients who died without recurrence 2; patients who died from recurrence 34; now living with recurrence 8; now living and free from recurrence 6; no further information obtainable 3; total 55. From a careful consideration of the facts presented the following conclusions are drawn: 1. Cancer of the breast, although a formidable disease, is amenable to treatment by operation, and the proportion of cures so obtained may confidently be put down at 12 per cent. 2. Non-success after operation is very frequently due to the extensive character of the disease when it first comes under observation; probably if relief were sought earlier a much larger proportion of cures would be obtained. 3. Moderate enlargement of the axillary glands is no bar to successful operation or to a successful issue, provided they are systematically and carefully removed and the axillary space carefully cleared. 4. It is wellnigh impossible to discover trifling enlargement of the axillary glands by an examination through the unbroken skin. 5. No operation for removal of cancer of the breast can be considered complete, unless the axilla be examined through the wound—the additional risk of such a procedure being very slight. 6. The large number of cases in which recurrence occurs locally, points to the necessity for very free removal of tissue; all doubtful skin must be taken away and great care must be exercised not to leave any outlying portions of breast tissue. 7. Operation is contra-indicated when the whole of the growth can not be removed or when the supraclavicular glands are enlarged. The only condition which might render an operation justifiable under such circumstances would be the presence of a foul cancerous ulcer, the removal of which is desirable on account of the great inconvenience which it occasions.[1]

Estimation of Duties on Medicines.—The collector of customs at Key West, Fla., recently wrote to the Treasury Department, stating that it has been the practice at that port, in estimating the duties on cases of medicines which arrive from Havana for immediate transportation without appraisement, to estimate the duty on each article, and that as the invoices cover a great many items which are expressed in Spanish, Latin, and botanical names, and generally indistinctly written, considerable delay occurs in the completion of the transportation papers, and inquiring whether such invoices may not be properly taken up in the entry as one case of medicines and the duty estimated on the aggregate value. The reply, made July 24, 1895, by Assistant Secretary Hamlin, is that if the merchandise is all of the same general character, and subject to the same rate of duty, it should be included in a single item in the entry and the duty estimated on the aggregate value as suggested, and that all items of the same general character and embraced in the same tariff designation should be included in a single item in the entry.

Certain Important Summer Charities of New York.—Among the summer charities of New York city, much good work is done by the Bartholdi Crêche and the Sick Children's Mission. The Bartholdi Crêche is on Randall's Island, opposite 120th Street. The distinguishing feature of this charity is to meet the needs of poor mothers and children who can not leave their homes to go all day to any of the more distant fresh air resorts. A mother can take her sick babe at a moment's notice and in a few moments reach shady groves and bracing air Last summer 4,366 mothers and children took advantage of this outing. This year, so far, the average is 700 to 800 a week. Trained nurses and helpers are in constant attendance. Tea and pure milk are provided. The crêche is one of the very many instrumentalities working for the prevention of sickness and death among the tenement-house, children, by taking them away from the disease-breeding influences of those parts of the city where they live, and administering to them the tonic of pure fresh air. The summer work of the Children's Aid Society is the maintenance of the Children's Summer home with the Haxtun Cottage for Crippled Children, at Bath Beach, L. I., the Health Home for mothers with sick infants at Coney Island, and the Sick Children's Mission, 287 East Broadway. At the Summer Home there were in 1894 over 5,000 children, 3,775 remaining a week. At the Health Home there were more than 7,000 mothers and infants who also received medical care. 2,000 of these were kept a week, and in some instances the time was prolonged, that a permanent cure might be effected. The Sick Children's Mission employed fifteen physicians to visit the tenement houses. Nearly 4,000 children were treated, 5,200 medical and food prescriptions were filled, and 32,000 tenement houses visited. My attention was called specially to the Crippled Children's Cottage, as the unique feature of the summer work of the society. Here little cripples, mostly

[1] The Lancet, Aug. 31, 1895.

girls are treated, and in many instances cured. The summer work of the society requires $20,000 for its support, and depends entirely upon individual gifts.

Amicrobic Suppuration.—At a recent meeting of the Paris Surgical Society, MM. Roger and Bonnet stated that it seems actually demonstrated that pus becomes sterile when inclosed in any old focus which does not communicate with the air. Microbes, virulent at first, become attenuated, then succumb, and, finally, are completely dissolved. Nevertheless, trouble may still be caused, as is shown by the following instance: a man entered the service of the authors, for pains at the upper part of the left hypochondrium, with febrile accesses returning every evening and accompanying the three classical stages of intermittent fever. A large tumor was found in the left flank, which was taken for a hypertrophied spleen and paludism was diagnosed. Quinin had no effect and the diagnosis was in doubt, when, three weeks after his admission, the patient passed a great quantity of pus in the urine. M. Tuffier, being consulted, deemed surgical intervention necessary, and made an incision in the lumbar region, which gave issue to two quarts of thick, reddish, fetid pus; the apparently normal kidney was discerned at the bottom of the wound. A diagnosis was now made of perinephric phlegmon, opening into the renal pelvis. Following the operation the patient had no more febrile exacerbations and rapidly recovered. Microscopic examination of the pus revealed no microbes—cultures were negative—inoculation on animals produced no effect. We have here, say the authors, to deal with an amicrobic suppuration—that is to say, a pus formation in which the microbes have been destroyed; nevertheless, this foyer continued to increase in area and tended to an opening into the neighboring organs; it caused violent pains and provoked an intermittent fever absolutely like that from fertile suppurations. It is abso lutely impossible to ascertain whether the pyogenic agents are still living or have been destroyed. From a theoretic point of view this is another instance of the pyretogenous rôle of microbic products, and shows that they may produce symptomatic intermittent fever, which is sometimes considered as due to the passage of bacteria into the blood. M. Rendu remarked that the most curious fact in the case was that the patient had febrile attacks daily; in the perinephric phlegmons which he had seen, the fever was manifested only in the last days.[1]

The "Bicycle Face."—In the midst of the ceaseless péans of praise to the bicycle as one of the most health-giving institutions a faint voice of warning sometimes is heard. Thus a recent medical writer in the *St. James' Budget*, while not denying the undoubted virtues of bicycle exercise, points out that not all riders present that healthful appearance one might look for, and in fact there is seen among their number a type, ashen-hued and haggard, already recognized as the "bicycle face." Not so with tricycle riders—and here is where he looks for an explanation. The distinguishing feature of the bicycle, and especially of the safety, this observer claims, is the difficulty of maintaining the equilibrium. "Learning" to ride, means mastering the art of keeping the machine upright. It has a tendency to fall to one side or the other all the time, which has to be counteracted by a special effort. The learner knows it very well to his cost; but once learned, he forgets about it, and does his balancing more or less automatically. Nevertheless, the effort is still there, and puts a constant, though unconscious, effort upon his brain and nervous system. The reason why the bicycle has to be "learned" at all, is that the center of equilibrium in the brain requires to be taught the business of doing its duty under novel circumstances. The falling bicycle is maintained upright by a constant series of small muscular movements, which unconsciously adjust the weight in the proper position and are themselves controlled by a special brain-center, situated at the back of the head. The strain upon this center is incessant, though unmarked; and some people can not stand it for more than a short time. This it is that causes the headache and the nervous exhaustion. Probably it does not affect those who begin very young, and possibly it affects those with either very tough or very dull nerves but little. Most of us, however, are obliged to live in such a way that our nervous systems become very susceptible to any unaccustomed strain, and those who are most likely to use the bicycle belong to the most susceptible classes. The nervous effort entailed by balancing the machine is too much for them. The explanation may strike some people as fantastic, but it is sound physiology, and it squares with the facts. Experienced cyclists often say that the tricycle, and even the old high bicycle—which requires less effort to balance—are less fatiguing for prolonged work, such as a tour, than the safety; yet the latter is lighter, quicker, and superior in nearly every respect, save that of stability. It is a question of balance. "Wheeling" is not a pursuit that will suit everybody.—*Western Druggist.*

Abandonment of Fort Buford, N. D.—This post, recently ordered by the Secretary of War to be discontinued, is situated on the north bank of the Missouri River, two miles below the mouth of the Yellowstone, one mile from the telegraph office and railway station on the Great Northern road and 660 miles from St. Paul, Minn. In 1866 when the post was established, it received a mail from the East once in two weeks in favorable weather, but in winter it was often cut off from communication with the outside world for six or more weeks at a time. The quarters first built were miserable adobe huts, protected from Indian assault by a stockade twelve feet high, on a plain which extended from the flood bank of the river northward to the hills, about four miles distant. Beyond the buttes or hills on the north is a rolling, barren prairie country. South of the post is the river, usually about half a mile wide, with bottom lands on either side subject to overflow and overgrown with cottonwood and willows. The site is dry with good surface drainage toward the river and toward shallow ravines on the east and the west. Water was found at a depth of fifty-two feet from the surface, underlying a thick bed of blue clay. In 1872 a permanent post was built, with the barracks of the men and the quarters of the officers facing each other on each side of a small rectangular parade ground. The former consisted of two double and three single frame buildings, each with wings for the kitchen, dining-room and store rooms. Ventilation was aided by inlets opening under the stoves and by exits in the ridge. The latter were small frame buildings of five rooms each, insufficiently heated in winter by stoves burning bituminous coal. The hospital was a two-story wooden structure consisting of an administration building and two twelve-bed wards, with kitchen and dining-room in an extension in the rear. Waste water was carried away by the natural inclination of the ground and by surface ditches. The earth closet system was used in the removal of excreta, which with all garbage, ashes and other refuse matters, were carted away daily to a dumping ground a mile distant from the post. As the well water proved to be quite hard, a systematic supply was taken from the river. This had the disadvantage of being often turbid, but when cleared of its suspended matters it was regarded as an excellent water. It was pumped from a depth of eighteen feet into a large storage tank of 56,000 gallons and distributed from an elevation of 100 feet. There was no visible source of contamination except the natural drainage of the country above the post, and no disease was ever attributed to the use of the water. Ice was cut from the river for use in summer. Gardens were cultivated in the bottom lands, producing lettuce, radishes, potatoes, cabbage, peas, turnips and beets in quantity sufficient to furnish a fair supply to the garrison during the season. The climate of this post was very trying as being one of great extremes. The mean temperature from November to February inclusive is below freezing and in February, the coldest month, the minimum may reach or exceed 40 degrees below zero, while in July and August the maximum is 100 degrees Fah. Changes of temperature are sudden, frequent and of great range, while violent winds and heavy snow storms are of common occurrence. The diseases of the post were rheumatic, catarrhal and pulmonary affections occurring mostly during the long winters, when the ordinary occupation of the troops in garrison was shoveling snow to keep the communications open for various purposes, but particularly for the delivery of fuel wherewith to keep themselves warm.

[1] Gaz. Med. de Paris, No. 82, 1895.

Society Notes.

NDO MEDICAL ASSOCIATION.—A regular meeting of the o Medical Association was held in that city Septem- 2.—At a recent meeting of the Brown County, Wis., al Society, at Green Bay, the following officers were d for the ensuing year: President, B. C. Brett; Vice- dent, F. L. Lewis; Secretary, H. M. Beck. This society rganized in 1868, but since the formation of the Fox Valley Medical Society there have been no meetings is society until this one.——The meeting of the Cuy- County, Ohio, Medical Society was held September A regular meeting of the Washington County Medical ty was held in Hillsboro, Wash., September 3.

Washington Notes.

ALTH OF THE DISTRICT.—The report of the Health Offi- for the week ended September 7, follows: number of s (still-births not included): white, 51; colored, 44; , 95. Death rate per 1,000 per annum, white, 14.13; ed, 26.03; total, 17.93. Death rate per 1,000 per annum orresponding week last year, 15.51. Reports to the th Department for the past week show a continued im- ement in the health of the city. The deaths in the week e last were 111, and during last week they numbered The death rate fell from 21.41 to 17.93, and the decrease ortality amounted to over 14 per cent. The absence of agious diseases in virulent form, which has prevailed g the summer months, was still manifest, there hav- been but one death from diphtheria and two from oping cough reported.

IGHEST TEMPERATURE IN SEPTEMBER FOR TWENTY-FOUR RS.—On the twelfth day of the present month the ther Bureau reported the maximum temperature in hington to be 96.2 degrees. Not since 1871 has the rec- for a maximum temperature been broken for the sec- ten days of September, and in that year on the 12th of month, the same date of the present break of the record, thermometer registered 94. The warm wave spread almost the entire country, and broke records in ten s, while in four other localities the thermometer reached highest mark it had ever attained. At Atlantic City thermometer was 92 degrees, 6 degrees higher than ever ore, and in Baltimore it was 94, or 4 degrees in excess previous records. A list of cities where the record of ious years was broken on the 12th inst. and the increase previous records being given, follows: Block Island, I., 78–2; New York, 92–3; Harrisburg, Pa., 92–4; Philadel- a, 94–3; San Antonio, Texas, 98–2; Columbus, Ohio, 94–1; rkersburg, W. Va., 94–2.

EAT INSPECTION POSTPONED.—Secretary Morton has mod- d the order issued on August 18, concerning the inspec- n of meat exported, changing the date when it is to go o effect, from September 16 to October 16. It has been resented, satisfactorily, that the enforcement of the order the time moved would cause great loss to shippers and postponement would not be detrimental. Consequently has extended the time.

HE WOMAN'S CLINIC.—The regular quarterly meeting of e Board of Directors of the Woman's Clinic was held on e 7th inst. The report of the various committees showed creased work and usefulness of the hospital during the st three months.

CENTRAL DISPENSARY AND EMERGENCY HOSPITAL.—The gular monthly meeting of the Board of Directors of the ospital was held on the 13th inst. Many improvements re been made to the building during the summer months, ch as painting, changes in the heating plant, electric ele- tor replacing steam, and new fire escapes. The work of e hospital has steadily increased. Resolutions of regret the loss by death of Mr. J. G. Judd, one of the directors, ere passed and ordered printed.

PUBLIC WELLS.—The report of the inspector shows that uring the year 194 wells were inspected, 96 were found to be good, 41 suspicious and 57 condemned. The most interesting part of the report deals with the investigation of the action of the Potomac water on lead pipe, to determine if enough lead is dissolved by the water to be injurious to public health.

TO INCREASE THE WATER SUPPLY.—The Commissioners of the District have ordered advertisements to be made for furnishing the city with a pumping engine of 8,000,000 gallons power.

Foreign Requirements for the Practice of Medicine.

GREAT BRITAIN.

Foreign practitioners can practice medicine in Great Britain without restriction, but unless registered can not recover their fees by legal process nor give medical evidence in courts of law, nor hold public medical offices. Under the Medical Act of 1886 the General Medical Council may recognize equivalent qualifications granted in countries which treat this country with reciprocity; after certain formalities such qualifications would be registrable. At present, however, no foreign countries have arranged to treat this country with reciprocity, and, as a rule, British practitioners are required in European countries to pass an examination of greater or less severity. The following list contains particulars as to the regulations of the British Colonies as well as of foreign countries:

BRITISH COLONIES AND DEPENDENCIES—(AUSTRALASIA]

Australia.—The applicant must be registered by the Medical Board of the colony in which he proposes to practice. He may be required to prove the genuineness and authenticity of his diplomas.

New Zealand.—Certain legal formalities must be gone through, but there is no examination.

Tasmania.—A diploma must be verified by the Medical Examining Board.

DOMINION OF CANADA.

Except in British Columbia and Ontario it is necessary only to register British diplomas, but evidence of authenticity and genuineness may be required. For this registration a fee is charged, and in some cases there is also an annual tax. In British Columbia the Medical Council of the colony holds an examination, and there is a fee of $100; in Ontario an examination is held by the College of Physicians and Surgeons of Toronto.

SOUTH AFRICA.

There is a Colonial Medical Council both in the Cape of Good Hope and Natal. British diplomas are registrable after inspection and verification.

By a resolution of the Executive Council, ratified by the Volksraad, every medical practitioner, dentist, and apothecary must be registered and licensed before he can be permitted to practice within the limits of the South African Republic. The section of the Act which applies is stringent, and runs as follows: "It shall not be allowed to any p.rson in this Republic to have himself advertised as medical practitioner, surgeon, dentist, apothecary, chemist, or druggist unless his name appears in the Register of the Medical Board and his admission fee has been paid. Contravention of this rule will be punished with a fine of from £10 to £100, or in case of non-payment with imprisonment with or without hard labor for a period of from one to six months." Also, "Any admitted medical doctor, surgeon or dentist, apothecary, chemist or druggist shall pay the following license dnring the time they carry on their profession within the Republic: doctors, for a year, £25, for nine months £20, for six months £15, and for three months, £10; apothecaries, for a year, £10, for nine months £8, for six month £6, and for three months £5."

WEST INDIES.

British qualifications are everywhere recognized. In some instances registration is necessary, for which a small fee is charged.

EUROPE.

Austria.—It is necessary to pass the State examination, or obtain a University Degree in Medicine, and to become an Austrian subject. Exemptions may be granted under very special circumstances.

Belgium.—Upon the advice of a jury which has a right to grant the diploma of Doctor, the Government can give permission to practice medicine to a foreign subject who possesses a diploma in medicine, surgery, and midwifery.

Denmark.—Foreigners are required to pass the State examination.

France.—Under the new law the degree of M.D. obtained by examination before a French faculty, is indispensable. This law has recently been extended to Algiers. The examinations are precisely the same as those which have to be passed by French students, but holders of British diplomas may obtain exemption from portions of the curriculum and examination at the discretion of the Minister of Public Instruction. In no case, however, shall the exemption extend to more than three of the prescribed examinations. The examinations may be passed before any one of the following Medical Faculties: Paris, Montpellier, Nancy, Bordeaux, Lyons, Lille, or Toulouse. Before he is admitted to examination the candidate must submit his qualifications, and whatever other degrees or qualifications he may possess, to the Minister of Public Instruction, stating the Faculty before which he wishes to present himself. The examinations are conducted in the French language. Fees to the amount of £64 must be paid.

Holland.—Foreigners are required to pass the State examination.

Germany.—Any person may practice medicine, but if he has not passed the State examination he does so at his own peril, and is liable to fine and imprisonment if convicted of a mistake. A lad who intends to enter the profession of medicine must attend a gymnasium (upper school), and pass an examination in general knowledge—Latin, Greek, German, French, divinity, mathematics, physics, history and geography. After passing this examination the student may be accepted as an ordinary full student of a university. At the end of the fourth semester (second year) he can pass his first State examination (*Tentamen Physicum*), which embraces anatomy, physiology and physics, chemistry, botany and zoölogy. In the tenth semester he may pass the final State examination. In some universities the degree of M.D. can be obtained at the end of the eighth semester (fourth year)—that is, before the *Staats-Examen* can be passed. The degree of M.D. does not in itself confer a license to practice in the German Empire. We belive that the Universities of Leipsic, Göttingen, Heidelberg and some others do not grant the degree of M.D. except to persons who have passed the State examin

tion. The fee for the *Tentamen Physicum* is £1 16s.; for the final State examination £10 6s. The fee to the university for the M.D. degree varies between £15 and £25.

Greece.—A State examination must be passed, but graduates of foreign schools may take their examination in French or English.

Italy.—A foreigner must (*a*) obtain an authorization (*abilitazione*) from one of the Royal Universities of Italy; or (*b*) if he desires to practice only among foreigners he is at liberty to do so.

Monaco.—The following British qualifications are, for the purposes of medical practice in the Principality of Monaco, considered equivalent to the French diploma of Doctor of Medicine: the degree of Doctor of Medicine, of the universities of "the United Kingdom of Great Britain," and the diplomas of Fellow of the Royal Colleges of Surgeons and Physicians of London, Edinburgh, Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. Every application for leave to practice must be accompanied by the diplomas of the applicant or by copies of those documents, certified as correct either by a consul of the Principality or by the Mayor of Monaco. The applicants must enter into an undertaking to live in the Principality and to practice their profession during the whole or part of the months of May, June, July, August, September and October, agreeably to Article 1 of the Ordinance of May 29, 1894. Only those who send in their applications in time will be included in the official list, which is to be drawn up and distributed at the beginning of each month to all the hotels and boarding houses, where it will be posted up in a conspicuous place. This list will contain the name and nationality of the practitioners and the nature and source of their qualifications.

Portugal.—The State examination must be passed.

Roumania.—A State examination must be passed (*viva voce.*)

Russia.—The State examination must be passed, but if the applicant possesses the degree of M.D. from a university of high repute, the Minister of Education may give an authorization after requiring the candidate to compose and defend a dissertation.

Norway.—The State examination must be passed.

Spain.—The State examination must be passed, but exemptions are sometimes granted on application through the British Ambassador. A license costing from £1 to £24 must be taken out. This regulation applies to Spanish colonies, (Canary Islands, etc.).

Switzerland.—A qualified English practitioner desiring to practice in Switzerland, even if he desires to practice only among his own countrymen, is required to pass the Federal examination in that country. The degree of Doctor of Medicine does not give the right to practice. The Federal examination may be passed at Basle, Zürich or Berne in German, and at Geneva or Lausanne in French. The applicant is advised to obtain from one of his teachers in this country an introduction to a professor at the university at which he proposes to pass the examination. His proper course would be to call upon the Rector of the university. We are informed that every information would be afforded, and that no difficulties are placed in the way of candidates. At the University of Zürich, the three examinations which it is necessary to pass are held as a rule at the following periods of the year. First examination: end of January and mid-September; second examination; end of January and mid-September; third examination: beginning of January, end of May and beginning of October. At Basle the next examinations are in October. At Geneva the examinations are held in the third week of October, and in the second week of July, at the opening and conclusion respectively of the winter and summer session. At Lausanne the examinations take place as follows: first and second examinations: April and October; final examination: February and March, and June and July.

Turkey.—An examination must be passed (fee, £4 10s.) at Constantinople.

SOUTH AMERICA.

Argentine Republic.—The applicant's diplomas must be verified by the Argentine Consul in this country (fee £1 4s). This should be done before leaving this country. On arriving at Buenos Ayres the indorsement of the Argentine Consul in this country must be verified by the Argentine Foreign Office. Three examinations must be passed in the University of Buenos Ayres or Cordova. First examination: anatomy with dissections, physiology, pathology, ophthalmology, and gynecology. Second examination: clinical and operative surgery, histology, materia medica, and mental diseases. Third examination: clinical medicine, pathology, midwifery, and toxicology. The fee for examination is $300, half of which is retained in case of rejection. The examinations can be passed consecutively at a few short intervals or separately; a rejected candidate is not re-admitted to examination until after the lapse of six months. The examination is conducted *viva voce* in Spanish. Temporary authorizations to practice for six months may be obtained from the Governor of a province, and the applicant may utilize this time to improve his knowledge of Spanish. The regulations for graduates of Spanish universities are less onerous.

Brazil.—A State examination must be passed which is conducted in Portuguese or French.

Chili.—The regulations resemble those in the Argentine Republic; examination by the University of Santiago.

Peru.—An examination must be passed before the University of Lima; it is conducted in Spanish.

Uruguay.—The conditions are similar to those in the Argentine Republic; examination by the University of Montevideo.—BRITISH MEDICAL JOURNAL.

THE PUBLIC SERVICES.

Circular—Disinfection of baggage arriving from Oriental ports, at ports on the Pacific Coast.

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY,
WASHINGTON, D. C., Sept. 7, 1895.

To medical officers of the Marine-Hospital Service, consular officers, collectors of customs, State and local quarantine officers, steamship companies and others concerned:

On account of the officially reported prevalence of cholera in Hongkong and Yokohama, and other Chinese and Japanese ports, and in Honolulu, attention is called to article 5 of the Quarantine Regulations, Treasury Department, to be observed at foreign ports, issued April 26, 1894.

No special provisions having been reported from these ports for proper disinfection of suspected baggage, it is hereby ordered on recommendation of the Surgeon-General of the Marine-Hospital Service, that all unlabelled baggage of steerage passengers, including hand baggage, and all labelled baggage of said passengers, which in the opinion of the quarantine officer should be disinfected or re-disinfected, arriving from Oriental ports, including ports of Hawaii, at any port in the States of Oregon, Washington, or California, shall be disinfected as provided in article 6 of the Quarantine Regulations for domestic p before being landed.

This regulation will also apply to any other baggage which the antine officer may suspect of being infected.

CHARLES S. HAMLIN,
Acting Secret

Army Changes. Official list of changes in the stations and duti officers serving in the Medical Department, U. S. Army, from Sep ber 7, 1895, to September 13, 1895.

Capt. Charles Richard, Asst. Surgeon, so much of S. O. 112, A. G. O., 13, 1895, as directs him to take station at St. Louis, Mo., for du attending surgeon and examiner of recruits, in that city, is revo and upon the expiration of his present leave of absence, he is dered to Ft. Brady, Mich , for duty, relieving Capt. William B. D Asst. Surgeon. Capt. Davis, on being thus relieved, will proce and take station in New York city, for duty as attending sur and examiner of recruits, relieving Capt. William H. Corbu Asst. Surgeon. Capt. Corbusier, on being thus relieved, is ord to Ft. Monroe, Va., for duty at that post.

Capt. William W. Gray, Asst. Surgeon, upon the expiration of his p ent leave of absence, will be relieved from duty at Ft. Schu N. Y., and ordered to Philadelphia, Pa., for duty as attending sur and examiner of recruits in that city, relieving Capt. Samuel Q. R inson, Asst. Surgeon. Capt. Robinson, on being thus relieved, is dered to Ft. Reno, Oklahoma, for duty, relieving Major William Gardner, Surgeon. Major Gardner, on being thus relieved, is ord to Ft. Thomas, Ky., for duty, relieving Major James C. Worthing Surgeon.

Major James C. Worthington, Surgeon, on being relieved from duty Ft. Thomas, Ky., is ordered to Vancouver Bks., Washington, duty, relieving Capt. William Stephenson, Asst. Surgeon. C Stephenson, on being thus relieved, is ordered to the Presidio of Francisco, Cal., for duty at that post.

The following named officers will report in person, on Monday, S 23, 1895, to Col. Charles H. Alden, Asst. Surgeon-General, Presid of the examining board appointed to meet in Washington, D. C., examination as to their fitness for promotion: Capt. Louis S. T son, Asst. Surgeon; Capt. William H. Corbusier, Asst. Surge Capt. Daniel M. Appel, Asst. Surgeon; Capt. Samuel Q. Robins Asst. Surgeon.

First Lieut. Charles E. B. Flagg, Asst. Surgeon, so much of S. O. A. G. O., Aug. 29, 1895, as relieves him from duty at Angel Island, C and assigns him to duty at Ft. Hancock, Texas, is revoked.

Capt. Edward C. Carter, Asst. Surgeon, upon the abandonment of Buford, N. D., will report for duty at Ft. Harrison, Mont.

First Lieut. Charles F. Kieffer, Asst. Surgeon, when his services are longer needed at Ft. Buford, will be relieved from duty at that p and will report for duty at Ft. Omaha, Neb.

First Lieut. Francis A. Winter, Asst. Surgeon, so much of the order directs him, on being relieved from duty at Ft. Hancock, Texas, Lieut. Flagg, to report for duty at Ft. Grant, Ariz., is amended direct him to so report upon the abandonment of Ft. Hancock.

Navy Changes. Changes in the Medical Corps of the U. S. Navy the week ending September 14, 1895.

Surgeon J. L. Neilson, detached from the U. S. R. S. "Wabash," and the U. S. S. "Maine."

P. A. Surgeon V. C. B. Means, from Naval Hospital, New York, and the U. S. S. "Maine."

Asst. Surgeon T. W. Richards, from the U. S. R. S. "Minnesota," and the U. S. S. "Maine."

Surgeon D. O. Lewis, from the U. S. S. "Mohican," and to the U. S. "Marion."

P. A. Surgeon J. E. Page, from the U. S. S. "Philadelphia," and to t Mare Island Hospital.

Asst. Surgeon R. K. Smith, from the U. S. R. S. "Vermont," and to t U. S. S. "Philadelphia."

Medical Director A. L. Gihon, detached from the Naval Hospital, Was ington, D. C., and placed on retired list September 28.

Medical Inspector Geo. A. Bright, detached from the Navy Yard, N York, and to Naval Hospital, Washington, D. C.

Medical Inspector A. F. Price, detached from Torpedo Station, and the New York Navy Yard.

Surgeon B. F. Stephenson, detached from the Marine Rendezvous, Bo ton, and to the U. S. R. S. "Wabash."

P. A. Surgeon J. F. Uric, ordered to the Marine Rendezvous, Bosto Mass.

Surgeon J. M. Steele, detached from Marine Rendezvous, New Yor and to the Torpedo Station, Newport.

Surgeon L. G. Heneberger, ordered to Marine Rendezvous, New Yor in addition to present duties.

Asst. Surgeon J. H. Moore, detached from the U. S. S. "Atlanta," a ordered to the U. S. T. S. "Constellation."

P. A. Surgeon Philip Leach, ordered to the Naval Hospital, New Yor

LETTERS RECEIVED.

Atkinson, W. B., Philadelphia, Pa.; Atlantic Medical Weekly, Prov dence, R. I.; Alta Pharmacal Co., St. Louis, Mo.
Blubaugh, C. H., Parkersburg, W. Va.; Brumder, Geo., Milwaukee, Wi
Cutter, Ephraim, New York City; Cleary, W. P., New York, N. Y.
Doliber Goodale Co., New York, N. Y.; Dunkel, E. K., Jersey City, N J.; Dunshie, E. J., New Orleans, La.
Ellegood, Robt., Delmar, Del.; Ellegood, J. A., Wilmington, Del.; E liott, A. R., Chicago; Eyre, Geo. G., Cape Town, So. Africa.
Gardner, R. W., New York, N. Y.; Gessner, H. B., New Orleans, La.
Herrick, S. S., San Francisco, Cal.; Herrington & Son, Elida, Ohio Herrick, H. C., Brocton, Ill.; Hall, Geo. W., Chicago; Heineman, Rich ard, Allegheny, Pa.; Hummel, A. L. (2), New York, N. Y.
Lehn & Fink, New York, N. Y.; Love, I. N., St. Louis.
Maynard, F. B., Albany, N. Y.; Madden, Jno., Milwaukee, Wis.; Mel lier, K. D., St. Louis, Mo.; Montgomery, E. E., Philadelphia, Pa.; Mess man, Hugo, Milwaukee, Wis.; MacLaury, D. H., New York, N. Y.; Mudd H. H., St. Louis, Mo.; Mann, E. C., New York.
Newman, H. P., Chicago, Ill.; Norbury, Frank P., St. Louis.
Public Library, Denver, Colo.
Reeves, Jas. E., Chattanooga, Tenn.; Rosse, I. C., Washington, D.C.
Stewart, F. E., Detroit, Mich.; Sawyer, A. P., Chicago, Ill.; Sprague W. B., Detroit; Spiegelhalter, Jos., St. Louis, Mo.
Tipton, Joseph S., Roanoke, Va.; Tuley, H. E., Louisville, Ky.
Winn, Geo. L., Rockford, Ill.; Walker, A. B., Canton, Ohio; Würde mann, H. V., Milwaukee, Wis.; Ward, M. R., Pittsburg, Pa.